IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

jc542 U.S. PTO
09/233218
01/20/99

In re application of:

Claire A. Cajacob and Jingdong Liu

Appl. No.: To be assigned

Filed: January 20, 1999

For: **Nucleic Acid Molecules and Other Molecules Associated With the Tetrapyrrole Pathway**

Art Unit: To be assigned

Examiner: To be assigned

Atty. Docket: 04983.0025.US01/38-21(15090)B

Statement Regarding Sequence Submission

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. § 1.821(f), the paper copy of the Sequence Listing and the computer readable copy of the Sequence Listing submitted herewith in the above-mentioned application are the same.

Respectfully submitted,

David R. Marsh (Reg. No. 41,408)

Date: January 20, 1999

HOWREY & SIMON
Box No. 34
1299 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2402
(202) 783-0800

<110> CaJacob, Claire A.
Liu, Jingdong

<120> Nucleic Acid Molecules and Other Molecules Associated with The Tetrapyrrole Pathway

<130> 04983.0025.US01/38-21(15090)B

<150> No. 60/067000 filed November 24, 1997, No. 60/069472 filed December 9, 1997, No. 60/072,027 filed January 21, 1998, No. 60/074,201 filed February 10, 1998, No. 60/074282 filed February 10, 1998, No. 60/074280 filed February 10, 1998, No. 60/074281 filed February 10, 1998, No. 60/074566 filed February 12, 1998, No. 60/074567 filed February 12, 1998, No. 60/074565 filed February 12, 1998, No. 60/075462 filed February 19, 1998, No. 60/075459 filed February 19, 1998, No. 60/075461 filed February 19, 1998, No. 60/075464 filed February 19, 1998, No. 60/075460 filed February 19, 1998, No. 60/075463 filed February 19, 1998, No. 60/077231 filed March 9, 1998, No. 60/077229 filed March 9, 1998, No. 60/077230 filed March 9, 1998, No. 60/078368 filed March 18, 1998, No. 60/080844 filed April 7, 1998, No. 60/083067 filed April 27, 1998, No. 60/083387 filed April 29, 1998, No. 60/083388 filed April 29, 1998, No. 60/083389 filed April 29, 1998, No. 60/085224 filed May 13, 1998, No. 60/085223 filed May 13, 1998, No. 60/085222 filed May 13, 1998, No. 60/086186 filed May 21, 1998, No. 60/086187 filed May 21, 1998, No. 60/086185 filed May 21, 1998, No. 60/086184 filed May 21, 1998, No. 60/086183 filed May 21, 1998, No. 60/086188 filed May 21, 1998, No. 60/089,524 filed June 16, 1998, No. 60/089,810 filed June 18, 1998, No. 60/089,814 filed June 18, 1998, No. 60/091,035 filed June 29, 1998, No. 60/091,405 filed June 30, 1998, "Nucleic Acid molecules and Other Molecules Associated with the Plant Sugar and Nitrogen Transporters Pathway" docket No. 38-21(15412)A filed June 30, 1998, No. 60/099670 filed September 9, 1998, No. 60/099697 filed September 9, 1998, No. 60/100674 filed September 16, 1998, No. 60/100672 filed September 16, 1998, No. 60/101130 filed September 21, 1998, No. 60/101,508 filed September 22, 1998, No. 60/101344 filed September 22, 1998, No. 60/101347 filed September 22, 1998, No. 60/101343 filed September 22, 1998, No. 60/104,128 filed October 13, 1998, No. 60/104,127 filed October 13, 1998, No. 60/109,018 filed November 18, 1998, No. 60/108,996 filed November 18, 1998, "Nucleic Acid Molecules and Other Molecules Associated With Plants" docket No. 38-21(15075)B filed November 24, 1998, No. 09/210,297 filed December 8, 1998, "Nucleic Acid Molecules and Other Molecules Associated with Plants" docket No. 38-21(15668)A filed December 11,

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1998 and No. 60/113,224 filed December 22, 1998

<151> No. 60/067000 filed November 24, 1997, No. 60/069472 filed December 9, 1997, No. 60/072,027 filed January 21, 1998, No. 60/074,201 filed February 10, 1998, No. 60/074282 filed February 10, 1998, No. 60/074280 filed February 10, 1998, No. 60/074281 filed February 10, 1998, No. 60/074566 filed February 12, 1998, No. 60/074567 filed February 12, 1998, No. 60/074565 filed February 12, 1998, No. 60/075462 filed February 19, 1998, No. 60/075459 filed February 19, 1998, No. 60/075461 filed February 19, 1998, No. 60/075464 filed February 19, 1998, No. 60/075460 filed February 19, 1998, No. 60/075463 filed February 19, 1998, No. 60/077231 filed March 9, 1998, No. 60/077229 filed March 9, 1998, No. 60/077230 filed March 9, 1998, No. 60/078368 filed March 18, 1998, No. 60/080844 filed April 7, 1998, No. 60/083067 filed April 27, 1998, No. 60/083387 filed April 29, 1998, No. 60/083388 filed April 29, 1998, No. 60/083389 filed April 29, 1998, No. 60/085224 filed May 13, 1998, No. 60/085223 filed May 13, 1998, No. 60/085222 filed May 13, 1998, No. 60/086186 filed May 21, 1998, No. 60/086187 filed May 21, 1998, No. 60/086185 filed May 21, 1998, No. 60/086184 filed May 21, 1998, No. 60/086183 filed May 21, 1998, No. 60/086188 filed May 21, 1998, No. 60/089,524 filed June 16, 1998, No. 60/089,810 filed June 18, 1998, No. 60/089,814 filed June 18, 1998, No. 60/091,035 filed June 29, 1998, No. 60/091,405 filed June 30, 1998, "Nucleic Acid Molecules and Other Molecules associated with the Plant Sugar and Nitrogen Transporters Pathway" docket No. 38-21(15412)A filed June 30, 1998, No. 60/099670 filed September 9, 1998, No. 60/099697 filed September 9, 1998, No. 60/100674 filed September 16, 1998, No. 60/100672 filed September 16, 1998, No. 60/101130 filed September 21, 1998, No. 60/101,508 filed September 22, 1998, No. 60/101344 filed September 22, 1998, No. 60/101347 filed September 22, 1998, No. 60/101343 filed September 22, 1998, No. 60/104,128 filed October 13, 1998, No. 60/104,127 filed October 13, 1998, No. 60/109,018 filed November 18, 1998, No. 60/108,996 filed November 18, 1998, "Nucleic Acid Molecules and Other Molecules Associated With Plants" docket No. 38-21(15075)B filed November 24, 1998, No. 09/210,297 filed December 8, 1998, "Nucleic Acid Molecules and Other Molecules Associated with Plants" docket No. 38-21(15668)A filed December 11, 1998 and No. 60/113,224 filed December 22, 1998

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ctgttttgcc accattttct gtctcatttt ccaggaggag attatcaatt agagcaacag 180

aaactgatac taatgaagtt caatctcagg cgccgggtac agcaccatca aaagatggtt 240

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tgttgctaaa tcaattgtgt gcatgatgat gtctgg 156

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atcgcttcgc ttcaagctcg acccgttttg ccacccttt ctgtctcatt ttccaggagg 180

agactatcaa ttagagcaac agaaactgat accaatgaag ttcaatctca ggcaccgggt 240

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tcattttcca ggaggagact atcaattaga gcaacagaaa ctgataccaa tgaagttcaa 180

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atcaa 245

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caccctttc tgtctcattt tccaggagga gactatcaat tagagcaaca gaaactgata 180

ccaatgaagt tcaatctcag gcaccgggtg cagcgccatc taaagatggt tcaagcttca 240

atcagcttct tggtatcaaa ggagctgc 268

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gcaattccca actgcaatgt gatttaacaa caacattaat aaccattttt atttgacata 180

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(99),(111),(116),(140),(149),(163),(210)
<223> unsure at all n locations

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<223> unsure at all n locations

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gccacaacag gcttgttcag agagcacatt cccttgttca gacttctctt ccctccattc 180

caaaagtaca taaccaaggg ctttgtctca gaagatgaat caggaaagag acttgcacag 240

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gacatgcaaa gaaacaccaa caccttggct ggacatgtgc cacccaaggc taaccttggt 180

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ggatcctttg atggcaccaa gg   262

<210>   14
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<212>   nucleic acid
<213>   Glycine max

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<221>   unsure
<222>   (71),(277)
<223>   unsure at all n locations

<400>   14

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gaagatgaag caggaaagag acttgctcag gttgtaagtg atccaagcct aacaaaatct 180

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gccagtgata cagagaaggc tcgtaagatc tgggagnta 279

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<400> 15

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ccctcatcga cttgcaaaag ggaattccaa caaaaatttg gccctttgag ggttcagtca 240

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ggcaacaaca actcca 256

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<222> (39),(318)
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<213> Glycine max

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cttcagctct ccctcatcga cttgcaaaag ggaattccaa caaaaatttg gcccctttgag 240

ggttcagtca gtggcaacaa caac 264

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ggttcagtca gtggca 256

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<222> (169),(213),(241),(251),(254)
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ggtgtatctc tcagggacac cacaatgttt ggtgtttcat tgtcggatac tctcaaatct 180

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<222> (444)
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<400> 31

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cgtttgaaaa ccagttgtct caggaggcca gtgatacaga gaaggctcgt aagatctggg 180

agattagtga gaaacttgtt ggttttgcct aagtgggagg agcctccaac atcccatgtt 240

gttctagaga ccttgcactt gcatggagga agaaaatgat gtctcaaaag agtggataga 300

taacatccta tcattttgaa tgcattgatg ttgttttgtt agctaggagc ttctttgctt 360

tgatgtaagg tgtcaatggc tttttgtgaa tcaagactca ataaaatcat tcagccatgt 420

gggtgtggtg aagttgctca taana 445

<210> 32
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 32

attgctcagg ttgtaagtga tccaagccta acaaaatctg gtgtttactg gagctggaac 60

aaagcatcag cttcgtttga aaaccagttg tctcaggagg ccagtgatac agagaaggct 120

cgtaagatct gggagattag tgagaaactt gttggttttg cctaagtggg aggagcctcc 180

aacatcccat gttgttctag agaccttgca cttgcatgga ggaagaaaat gacgtctcaa 240

aagagtggat agataa 256

<210> 33
<211> 259
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (209)
<223>

<400> 33

ggctaaacag ctcagccatg attgatggtg gagacttcga tggtgccaag gcgtacaagg 60

acagcaaagt ctgcaatatg ctcacaatgc aagaattcca cagacgattc catgaggaaa 120

ctggaatcac atttgcttcc ctttaccccg gttgcattgc cacaacaggc ctgttcagag 180

agcacttccc ttgttcagaa actctgttnc cctcccattc cagaagtaca taaaccaaag 240

gctatgtctc cggaagatg 259

<210> 34
<211> 176
<212> nucleic acid
<213> Glycine max

<400> 34

agcataatgc cacaaatgca gaatttcaca gacgattcca tgaggatact ggaatcacat 60

ttgcttccct ttaccccggt tgcattgcca caacaggcct gttcagagag cacattccct 120

tgttcagaac tctgtccctc cattccagaa gtacataacc aaagggctat gtctca 176

<210> 35
<211> 256
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (37)
<223>

<400> 35

caggaaagag acttgcacag gttgtgagtg atccacnccc taacaaaatc aggtgtttac 60

tggagctgga acgcggcctc tgcttcgttt gaaaaccaat tgtcccaaga agccagcgat 120

gcagataagg tcgcaaggtt tgggagatta gtgagaaact tactggtttg gcttaagtgg 180

tactttggca gcttccaata tccatcttga tttagggaca tttgtcatgg agttcaataa 240

catctcagaa gagttt 256

<210> 36
<211> 248
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (76),(135)
<223> unsure at all n locations

<400> 36

caggaaagag acttgcacag gttgtgagtg atccaagcct aacaaaatca ggtgtttact 60

ggagctggaa cgcggncctg ctgcttcgtt tgaaaaccaa ttgtgcccaa gaagccagcg 120

atgcagataa ggctncgcaa ggtttgggag attagtgaga aacttactgg tttgggctaa 180

gtggtacttt ggcagcttcc caatatccat ctgatttagg gacattgtca ggagttcaat 240

aacatctc 248

<210> 37
<211> 335
<212> nucleic acid
<213> Glycine max

<400> 37

ggtgtgtctc tcaaggactc caccttgttc ggtctttcat tttcagaacc tatcaaagct 60

aacttcagct cttctgcatt gaggtgtcag agggaattcg aacaaaagct ctgtgctgtg 120

agggccgaaa cagtggctac agcctctcca gcagttacca agtctacacc agaagggaag 180

aaaacattga ggaagggcag tgttgtgata actggggctt catctggact aggcctggcc 240

actgctaagg ctttggctga gacgggaaaa tggcatgtaa taatggcctg cagggattac 300

ctcaaagctg caagagctgc aaaatccgct ggcat 335

<210> 38
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 38

cggaaaatgg catgtaataa tggcctgcag ggattacctc aaagctgcaa gagctgcaaa 60

atccgctggc atggctaagg aaaactacac catcatgcac taggaccttg cctcgctcga 120

cagtgtccgc caatttgttg ataacttcag aagatcggaa atgccgttag atgtgctggt 180

ttgcaatgct gctgtttact tgccaactgc taaggaacct accttcactg ctgagggctt 240

tgaacttagt gttgggac 258

<210> 39
<211> 246
<212> nucleic acid
<213> Glycine max

<400> 39

aaacattgag gaagggcagt gttgtgataa ctggggcttc atctggacta ggcctggcca 60

ctgctaaggc tttggctgag acgggaaaat ggcatgtaat aatggcctgc agggattacc 120

tcaaagctgc aagagctgca aaatccgctg gcatggctaa ggaaaactac accatcatgc 180

acttggacct tgcctcgctc gacagtgtcc gccaatttgt tgataacttc agaagatcgg 240

aaatgc 246

<210> 40
<211> 260
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (9)
<223>

<400> 40

ctgcaaganc tgcaaaatcc gctggcatgg ctaaggaaaa ctacaccatg aatgcacttg 60

gaccttgcct cgctcgacag tgtccgccaa tttgttgata acttcagaag atcagaaatg 120

ccgttagatg tgctggtttg ccatgctgct gtttacttgc caactgctaa ggaacctacc 180

ttcactgctg agggctttga acttagtgtt gggacaaatc atctggggca tttcctcctc 240

tcgcgcctgt tgcttgagga 260

<210> 41
<211> 278
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (49),(146)
<223> unsure at all n locations

<400> 41

attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggttna agagggaatt 60

cgaacaaaaa gctctgtgct gtgagggccg aaacagtggc tacagcctct ccagcagtta 120

ccaagtctac accagaaggg aagaanacat tgaggaaggg cagtgttgtg ataactgggg 180

cttcatctgg actaggcctg gccactgcta aggctttggc tgagacggga aaatggcatg 240

taataatggc ctgcagggat tacctcaaag ctgcaaga 278

<210> 42
<211> 248
<212> nucleic acid
<213> Glycine max

<400> 42

ctgtgctgtg agggccgaaa cagtggctac agcctctcca gcagttacca agtctacacc 60

agaagggaac gaaaacattg aggaagggca gtgttgtgat aactggggct tcatctggac 120

taggcctggc cactgctaag gctttggctg agacgggaaa atggcatgta ataatggcct 180

gcagggatta cctcaaagct gcaagagctg caaaatccgc tggcatggct aaggaaaact 240

acactgtc 248

<210> 43
<211> 280
<212> nucleic acid
<213> Glycine max

<400> 43

gtgtctctca aggactccac cttgttcggt ctttcatttt cagaacctat caaagctaac 60

ttcagctctt ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg 120

gccgaaacag tggctacagc cttccagcag ttaccaagtc tacaccagaa gggaagaaaa 180

cattgaggaa gggcagtgtt gtgataactg gggcttcatc tggactaggc ctggccactg 240

ctaaggcttt ggctgagacg ggaaaatggc atgtaataat 280

<210> 44
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 44

aaagagtggt gtgtctctca aggactccac cttgttcggt ctttcatttt cagaacctat 60

caaagctaac ttcagctctt ctgcattgag gtgtaagagg gaattcgaac aaaagctctg 120

tgctgtgagg gccgaaacag tggctacagc ctctccagca gttaccaagt ctacaccaga 180

agggaagaaa acattgagga agggcagtgt tgtgataact ggggcttcat ctggactagg 240

cctggccact gctaaggctt tggctgaga 269

<210> 45
<211> 236
<212> nucleic acid
<213> Glycine max

<400> 45

cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggaagcaaac 60

attgaggaag ggcagtgttg tgataactgg ggcttcatct ggactaggcc tggccactgc 120

taaggctttg gctgagacgg gaaaatggca tgtaataatg gcctgcaggg attacctcaa 180

agctgcaaga gctgcaaaat ccgctggcat ggctaaggaa aactacacca tcatgc 236

<210> 46
<211> 211
<212> nucleic acid
<213> Glycine max

<400> 46

ctcgagcgtg cgagaagaga cagaaggggg aaaatggcat gtaataatgg cctgcaggga 60

ttacctcaaa gctgcaagag ctgcaaaatc cgctggcatg gctaaggaaa actacaccat 120

catgcacttg gaccttgcct cgctcgacag tgtccgccaa tttgttgata acttcagaag 180

atcggaaatg ccgttagatg tgctggtttg c 211

<210> 47
<211> 276
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (185),(264)
<223> unsure at all n locations

<400> 47

ctttttttct tcttcttgaa atggctctcc aggctgcttc tcctgttcct gcttctttct 60

cggttcttaa agagggaaag agtggtgtgt ctctcaagga ctccaccttg ttcggtcttt 120

cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggtgc aagagggaat 180

tcgancaaaa gctctgtgct gtgagggccg aaacagtggc tacagcctct ccagcagtta 240

ccaagtctac accagaaggg aagnaaacat tgagga 276

<210> 48
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 48

cttctcttgt tcctgcttct ttctcggttc ttaaagaggg aaagagtggt gtgtctctca 60

aggactccac cttgttcggt ctttcatttt cagaacctat caaagctaac ttcagctctt 120

ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg gccgaaacag 180

tggctacagc ctctccagca gttaccaagt ctacaccaga agggaagaaa acattgagga 240

agggcagtgt tgtgataact ggggcttca 269

<210> 49
<211> 279
<212> nucleic acid
<213> Glycine max

<400> 49

tagtcaaaat ctagtttcat acttttgttc ttcttcttga aatggctctc caggctgctt 60

ctcttgttcc tgcttctttc tcggttctta aagagggaaa gagtggtgtg tctctcaagg 120

attccacctt gttcggtctt tcatttttcag aacctatcaa agctaacttc agctcttctg 180

cattgaggtg caagagggaa ttcgaacaaa agctctgtgc tgtgagggcc gaaacagtgg 240

ctacagcctc tccagcagtt accaagtcta caccagaag 279

<210> 50
<211> 257
<212> nucleic acid
<213> Glycine max

<400> 50

ttctcttgtt cctgcttctt tctcggttct taaagaggga aagagtggtg tgtctctcaa 60

ggactccacc ttgttcggtc tttcattttc agaacctatc aaagctaact tcagctcttc 120

tgcattgagg ttcaagaggg aattcgaaca aaagctctgt gctgtgaggg ccgaaacagt 180

ggctacagcc tctccagcag ttaccaagtc tacaccagaa gggaagataa cattgaggaa 240

gggcagtgtt gtgataa 257

<210> 51
<211> 243
<212> nucleic acid
<213> Glycine max

<400> 51

ggctgcttct cttgttcctg cttctttctc ggttcttaaa gagggaaaga gtggtgtgtc 60

tctcaaggac tccaccttgt tcggtctttc attttcagaa cctatcaaag ctaacttcag 120

ctcttctgca ttgaggtgca agagggaatt cgaacaaaag ctctgtgctg tgagggccga 180

aacagtggct acagcctctc cagcagttac caagtctaca ccagaaggga agaaaacatt 240

gag 243

<210> 52
<211> 277
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (201),(228)
<223> unsure at all n locations

<400> 52

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60

ccaggctgct tctcttgttc ctgcttcttt ctcggttctt aaagagggaa agagtggtgt 120

gtctctcaag gactccacct tgttcggtct ttcattttca gaacctatca aagctaactt 180

cagctcttct gcattgaggt ncaagaggga attcgaacaa aagctctntg ctgtgagggc 240

cgaaacagtg gctacagcct ctccagcagt taccaag 277

<210> 53
<211> 271
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (46),(193),(261)...(262)
<223> unsure at all n locations

<400> 53

ctttttttct tcttcttgaa tggctctcca ggctgcttct cttgancctg cttccttctc 60

ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt tcggtctttc 120

attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggttaa gagggaattc 180

gaacaaaagc tcngtgctgt gagggccgaa acagtggcta cagcctctcc agcagttacc 240

aagtctacac cagaaggcaa nnaacattga g 271

<210> 54
<211> 269
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(255)
<223> unsure at all n locations

<400> 54

cnatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60

ccaggctgct tctcttgttc ctgcttcttt ctcggttctt aaagagggaa agagtggtgt 120

gtctctcaag gactccacct tgttcggtct ttcattttca gaacctatca aagctaactt 180

cagctcttct gcattgaggt ccaagaggga attcgaacaa aagctctgtg ctgtgagggc 240

cgaaacagtg gctanagcct ctccagcag 269

<210> 55
<211> 282
<212> nucleic acid
<213> Glycine max

<400> 55

tcaaaatcta gtttcatact tttcatcttc ttcttgaaat ggctctccag gctgcttctc 60

ttgttcctga ttctttctcg gttcttaaag acggtgagat gtggtgtgtc tctcaaggac 120

tccacctagt tcggtctggc attttcagaa cctatcaaag ctaacttaag ctcttctgca 180

ttgaggtgca agagggattc cgcacaaaag ctctgtgctg tgagtgccga gacagtggct 240

acagcgtctg cagcagttac caagtctaca cgagaaggga ag 282

<210> 56

<211> 263
<212> nucleic acid
<213> Glycine max

<400> 56

acttctcttg ttcctgcttc tttctcggtt cttaaagagg gacagagtgg tgtgtctctc 60

aaggactccg cttgttcggt ctttcatttt cagaacctat caaagctaac ttcagctctt 120

ctgcattgag gtgcaagagg gaattcgaac aatcgctctg tgctgtgagg gccgaaacag 180

tggttacagc ctctccagca gttaccaagt ctacaccaga tgggaagaaa acattgagtg 240

aaggagtgtg gtgaaactgg ggc 263

<210> 57
<211> 313
<212> nucleic acid
<213> Glycine max

<400> 57

gaaatggctc tccaggctgc ttctcttgtt cctgcttctt tctcggttct taaagaggga 60

aagagtggtg tgtctctcaa ggactccacc ttgttcggtc tttcattttc agaacctatc 120

aaagctaact tcagctcttc tgcattgagg tgcaagaggg aattcgaaca aaagctctgt 180

gctgtgaggg ccgaaacagt ggctacagcc tctccagcag ttaccaagtc tacaccagaa 240

ggcaagaaaa cattgaggaa gggcagtgtt gtgataactg gggcttcatc tggacgaggc 300

ctggccactg cta 313

<210> 58
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 58

ccgtgataac acactaacac caccacttca tcaactttac ttgacaacaa tattgtaaaa 60

ctcaaaatct agtttcatac ttttgttctt cttcttgaaa tggctctcca ggctgcttct 120

cttgttcctg cttctttctc ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac 180

tccaccttgt tcggtctttc attttcagaa cctatcaaag ctaacttcag ctcttctgca 240

ttgaggtgca agagggaatt cgaaca 266

<210> 59
<211> 277
<212> nucleic acid
<213> Glycine max

<400> 59

caccatcact tcatcaactt tacttgacaa caatattgta aaactcaaaa tctagtttca 60

tacttttttt cttcttcttg aaatggctct ccaggctgct tctcttgttc ctgcttcttt 120

ctcggttctt aaagagggaa agagtggtgt gtctctcaag gactccacct tgttcggtct 180

ttcattttca gaacctatca aagctaactt cagctcttct gcattgaggt gcaagaggga 240

attcgaacaa aagctctgtg ctgtgagggc cgaaaca 277

<210> 60
<211> 151
<212> nucleic acid
<213> Glycine max

<400> 60

gcatctttct cggttcttaa agagggaaag actggtgtgt cactcacgga ttccaccttg 60

tacggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggtgc 120

aagagggaat tcgaacaaaa actctgtgct g 151

<210> 61
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 61

caccacttca tcaactttac ttgacaacaa tattgtaaaa ctcaaaatct agtttcatac 60

ttttttttact cttcttgaaa tggctctcca ggctgcttct cttgttcctg cttctttctc 120

ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt tcggtctttc 180

attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggtgca agagggaatt 240

cgaacaaaag ctctgtgctg tgaggg 266

<210> 62
<211> 229
<212> nucleic acid

<213> Glycine max

<400> 62

ttcatcaact ttacttgaca acaatattgt aaaactcaaa atctagtttc atacttttt 60

tcttcttctt gaaatggctc tccaggctgc ttctcttgtt cctgcttctt tctcggttct 120

taaagaggga aagagtggtg tgtctctcaa ggactccacc ttgttcggtc tttcattttc 180

agaacctatc aaagctaact tcagctcttc tgcattgagg tgcaagagg 229

<210> 63
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 63

cccgtgataa cacactaaca ccatcacttc atcaacttta cttgacaaca atattgtaaa 60

actcaaaatc tagtttcata cttttattcg tcttctttaa atggctctcc aggctgcttc 120

tcttgttcct gcttctttct cggttcttaa atagggaaag agtggtgtgt ctctcaagga 180

ctccaccttg ttcggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc 240

attgaggttc aagagggaat tcgaacaa 268

<210> 64
<211> 278
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (4),(23),(26),(50)...(51),(234)
<223> unsure at all n locations

<400> 64

tatnatacca cttcatcaac ctnacnctga caacaatatt gtaaaactcn naatctagtt 60

tcatactttt tttcttcttc ttgaaatggc tctccaggct gcttctcttg ttcctgcttc 120

tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc aaggactcca ccttgttcgg 180

tctttcattt tcagaaccta tcaaagctaa cttcagctct tctgcattga ggtntcaaga 240

gggaattcga acaaaagctc tgtgctgtga gggccgaa 278

<210> 65
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 65

ttcatcaact ttacttgaca acaatattgt aaaattcaaa atctagtttc atacttttat 60

tcttcttctt gaaatggctc tccaggctgc ttctcttgtt cctgcttctt tctcggttct 120

taaagaggga aagagtggtg tgtctctcaa ggactccacc ttgttcggtc tttcattttc 180

agaacctatc aaagctaact tcagctcttc tgcattgagg tttaagaggg aattcgaaca 240

aaagctctgt gctgtgaggg ccgaaacagt ggcta 275

<210> 66
<211> 344
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (11)
<223>

<400> 66

caatattgta naactcaaaa tctagtttca tacttttctt ctacttcttg aaatggctct 60

ccaggctgct tctcttgttc ctgcttcttt ctcggttctt aaagagggaa agagtggtgt 120

gtttctcaag gactccacct tgttcggtct ttcattttca gaacctttta tagctaactt 180

cagctcttct gcattgaggt gtaagaggga attcgaacaa aagctctgtg ctgtgagggc 240

cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggacgtcaac 300

attgaggaag ggcagtgttg tgataactgg ggcttcatct ggac 344

<210> 67
<211> 255
<212> nucleic acid
<213> Glycine max

<400> 67

cgccgtgata acacactaac accaccactt catcaacttt acttgacaac aatattgtaa 60

aactcaaaat ctagtttcat actttttttc ttcttcttga aatggctctc caggctgctt 120

ctcttgttcc tgattcttac tcggttctta aagagggaaa gagtggtgtg tctctcaagg 180

actccacctt gttcggtctt tcattttcag aacctatcaa agctaacttc agctcttctg 240

cattgaggtg caaga 255

<210> 68
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 68

ttttcattac cgccgtgata acacactaac accaccactt catcaacttt acttgacaac 60

aatattgtaa aactcaaaat ctagtttcat actttttttc ttcttcttga aatggctctc 120

caggctgctt ctcttgttcc tgcttctttc tcggttctta aagagggaaa gagtggtgtg 180

tctctcaagg actccacctt gttcggtctt tcattttcag aacctatcaa agctaacttc 240

agctcttct 249

<210> 69
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 69

cacactaaca ccaccacttc atcaacttta cttgacaaca atattgtaaa actcaaaatc 60

tagtttcata ctttttttct tcttcttgaa atggctctcc aggctgcttc tcttgttcct 120

gcttctttct cggttcttaa agagggaaag agtggtgtgt ctctcaagga ctccaccttg 180

ttcggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggttc 240

aagagggaa 249

<210> 70
<211> 294
<212> nucleic acid
<213> Glycine max

<400> 70

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60

ccaggctgct tctcttgttc ctgcttcttt ctcggttctt aaagagggaa agagtggtgt 120

gtctctcaag gactccacct tgttcggtct ttcattttca gaacctatca aagctaactt 180

cagctcttct gcattgaggt gcaagaggga attcgaacaa aagctctgtg ctgtgagggc 240

cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggaa 294

<210> 71
<211> 270
<212> nucleic acid
<213> Glycine max

<400> 71

ctccaggctg cttctcttgt tcctgcttct ttctcggttc ttaaagaggg aaagagtggt 60

gtgtctctca aggactccac cttgttcggt ctttcatttt cagaacctat caaagctaac 120

ttcagctctt ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg 180

gccgaaacag tggctacagc ctctccagca gttaccaagt ctacaccaga aggcaagata 240

acattgagaa gggcagtgtt gtgataactg 270

<210> 72
<211> 254
<212> nucleic acid
<213> Glycine max

<400> 72

attaccgccg tgataacaca ctaacaccac cacttcatca actttacttg acaacaatat 60

tgtaaaactc aaaatctagt ttcatacttt ttttcttctt cttgaaaggc tctccaggct 120

gcttctcttg ttcctgcttc tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc 180

aaggactcca ccttgttcgg tctttcattt tcagaaccta agctaacttc agctcttctg 240

cattgaggtg caag 254

<210> 73
<211> 100
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (79)
<223>

<400> 73

ccctgcaggc cattattaca aagctgcaag agctgcaaaa tccgctggca tggctaagga 60

aaactacacc atcatgcanc ttggaccttg cctcgctcga 100

<210> 74
<211> 262
<212> nucleic acid
<213> Glycine max

<400> 74

cgccgtgata acacactaac accaccactt catcaacttt acttgacaac aatattgtaa 60

aactcaaaat ctagtttcat actttttttc ttcttcttga aatggctctc caggctgctt 120

ctcttgttcc gcttctttct cggttcttaa agagggaaag agtggtgtgt ctctcaagga 180

ctccaccttg ttcggtcttt cattttcaga acctatcaaa gctaacttca tcttctgcat 240

tgaggtgcaa gagggaattc ga 262

<210> 75
<211> 184
<212> nucleic acid
<213> Glycine max

<400> 75

gtgataacac actaacacca ccacttcatc aactttactt gacaacaata ttgtaaaact 60

caaaatctag tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct 120

tgttcctgct tctttctcgg ttcttaaaga gggaaagagt ggtgtgtctc tcaaggactc 180

cacc 184

<210> 76
<211> 229
<212> nucleic acid
<213> Glycine max

<400> 76

ggaaccacac atttttcatt accgccgtga taacacacta acaccaccac ttcatcaact 60

ttacttgaca acaatattgt aaaactcaaa atctggtttc atacttttt tcttcttctt 120

gaaatggctc tccaggctgc ttctcttgtt cctgcttctt tctcggttct taaagaggga 180

aagagtggtg tgtctctcaa ggactccacc ttgttcggtc tttcatttt 229

<210> 77
<211> 270
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (81)...(103),(225),(252),(254),(259),(263)
<223> unsure at all n locations

<400> 77

attaccgtcg tgataacaca ctaacaccac cacttcatca actttacttg acaacaatat 60

tgtaaaactc aaaatctagt nnnnnnnnnn nnnnnnnnnn nnngaaatgg ctctccaggc 120

tgcttctctt gttcctgctt ctttctcggt tcttaaagag ggaaagagtg gtgtgtctct 180

caaggactcc accttgttcg gtctttcatt ttcagaacct atcanagcta acttcagctc 240

ttctgcatga gngntagang gantcgaaca 270

<210> 78
<211> 267
<212> nucleic acid
<213> Glycine max

<400> 78

ggctgcgaga agacgacaga aggggaacca cacatttttc attaccgccg tgataacaca 60

ctaacaccac cacttcatca actttacttg acaacaatat tgtaaaactc aaaatctagt 120

ttcatacttt ttttcttctt cttgaaatgg ctctccaggc tgcttctctt gttcctgctt 180

ctttctcggt tcttaaagag ggaaagagtg gtgtgtctct caaggactcc accttgttcg 240

gtctttcatt ttcagaacct atcaaag 267

<210> 79
<211> 158
<212> nucleic acid
<213> Glycine max

<400> 79

tcaaaatcta gtttcatact ttttttcttc ttcttgaaat ggctctccag gctgcttctc 60

ttgttcctgc ttctttctcg gttcttaaag agggaaagag tggtgtgtct ctcaaggact 120

ccaccttgtt cggtctttca ttttcagaac ctatcaaa 158

<210> 80
<211> 278
<212> nucleic acid
<213> Glycine max

<400> 80

cacactaaca ccaccacttc atcaacttta cttgacaaca atattgtaaa actcaaaatc 60

tagtttcata ctttttttct tcttcttgaa atggctctcc aggctgcttc tcttgttcct 120

gcttctttct cggttcttaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt 180

tcggtctttc attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggtgca 240

agagggaatt cgaacaaaag ctctgtgctg tgagggcc 278

<210> 81
<211> 285
<212> nucleic acid
<213> Glycine max

<400> 81

cacggctgcg aaagacgaca gaaggggacc acacattttt cattaccgcc gtgataacac 60

actaacacca ccagctcatc aactttactt gacaacaata ttgtaaaact caaaatctag 120

tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct tgttcctgct 180

tctttctcgg ttcttaaaga gggaaagagt ggtgtgtctc tcaaggactc caccttgttc 240

ggtctttcat tttcagaact atcaaagcta attcagctct tctgc 285

<210> 82
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 82

ggttaccatt atttctttat aactatacta ctcatcagct gcatggtatt tttgctttca 60

ttgttggtgt tgttgttgat ccacttcatc aactttactt gacaacaaga ttgtaaaact 120

caaaatctag tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct 180

tgttcctgct tctttctcgg ttcttaaagc gggcaagagt ggtgtgtctc tcaaggactc 240

caccttgttc ggtctttcat tttcagaac 269

<210> 83
<211> 260
<212> nucleic acid
<213> Glycine max

<400> 83

acggcgagaa gacgacagaa ggggaaccac acatttttca ttaccgccgt gataacacac 60

taacaccacc acttcatcaa ctttacttga caacaatatt gtaaaactca aaatctagtt 120

tcatactttt tttcttcttc ttgaaatggc tctccaggct gcttctcttg ttcctgcttc 180

tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc aaggactcca ccttgttcgg 240

tctttcattt tcagaaccta 260

<210> 84
<211> 108
<212> nucleic acid
<213> Glycine max

<400> 84

ttcagctctg ctgcattgag gtgccagagg gaattcgaac aaaagctctg tgctgtgagg 60

gccgaaacag tggctacagc ctctccagca gttaccaagt ctacacca 108

<210> 85
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 85

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60

ccaggctgcc tctcttgttc ctgcttcttt ctcggttctt aaagagggaa agagtggtgt 120

gtctctcaag gactcacctt gttcggtctt tcattttcag aacctatcaa agctaacttc 180

agctcttctg cattgaggtg taagagggaa ttcgaacaaa agctctgtgc tgtgagggcc 240

gaaacagtgg ctacagcc 258

<210> 86
<211> 250
<212> nucleic acid

<213> Glycine max

<400> 86

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60

ccaggctgct tctcttgttc ctgcttcttt ctcggttctt aaagagggaa agagtggtgt 120

gtctctcaag gctccacctt gttcggtctt tcattttcag aacctatcaa agctaacttc 180

agctcttctg cattgaggtg caagagggaa ttcgaacaaa agctctgtgc tgtgaggcga 240

aacagtggct 250

<210> 87
<211> 260
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (81),(212)...(213)
<223> unsure at all n locations

<400> 87

caaaaatttg gccctttgag ggttcagtca gtggcaacaa caactccagg agtcaccaag 60

gcttcaccag aaggcaagaa nactttgagg aaaggcagtg ttattatcac tggggcttcc 120

tctggattag gcctggccac tgctaaggct ttggctgaga caggaaagtg gcatgtgata 180

atggcctgcc gggatttcct caaagccgaa anngctgcga aatctgccgg cattgctaag 240

gaaaactaca ctattatgca 260

<210> 88
<211> 281
<212> nucleic acid
<213> Glycine max

<400> 88

caacaaaaaa ttggcccttt gagggttcag tcagtggcaa caaccactcc aggagtcacc 60

aaggcttcac cagaaggcaa gaaaactttg aggaaaggca gtgttattgt cactgggctt 120

cctctggatt aggcctggcc acggccaagg ctttggctga gacaggaaag tggcatgtga 180

ttatgcactg cagggatttc ctcaaagctg agagggctgc aaaatctgct ggcattgcta 240

aggaaattgt gtctcttgat agtgtgaggc aatttgtgga t 281

<210> 89
<211> 385
<212> nucleic acid
<213> Glycine max

<400> 89

ctttgaactt agtgttgggc caaataattt gggcgttttc gtctctctcg cctgttgctt 60

gaggacttgg aaaaatccga ttacccttca aagcgcttga tcatcgttgg ttcaatatca 120

cggaacacac acacattggc tggtaatgta cctcccaagg ctaaccttgg tgacttgagg 180

ggacttcaag gtggtttgaa tgggcttaac agctcagcca tgattgatgg tggagacttc 240

gatggtgcca aggcgtacaa ggacagcaaa gtctgcaata tgctcacaat gcaagaattc 300

cacagacgat ttcatgagga aaactgaatc acatttgctt tcctttaacc ccggtgcatt 360

gccacaacag gcctgttcag agagc 385

<210> 90
<211> 241
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (223)
<223>

<400> 90

gataacttca gaagatcgga aatgccgtta gatgtgctgg tttgcaatgc tgctgtttac 60

ttgccaactg ctaaggaacc taccttcact gctgagggct ttgaacttag tgttgggaca 120

aatcatctgg ggcatttcct cctctcgcgc ctgttgcttg aggacttgga aaaatccgat 180

tacccttcaa agcgcttgat catcgttggt tcaataacag ggnacacaaa cacattggct 240

g 241

<210> 91
<211> 267
<212> nucleic acid
<213> Glycine max

<400> 91

ctcctctcgc gcctgttgct tgaggacttg gaaaaatccg attacccttc aaagcgcttg 60

atcatcgttg gttcaataac agggaacaca aacacattgg ctggtaatgt acctcccaag 120

gctaaccttg gtgacttgag gggacttcag ggtggtttga atgggctaaa cagctcagcc 180

atgattgatg gtggagagat cgatggtgcc aaggcgtaca aggacagcaa agtctgcaat 240

atgctcacaa tgcaagaatt ccacaga 267

<210> 92
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 92

ttagatgtgc tggtttgcaa tgctgctgtt tacttgccaa ctgctaagga acctaccttc 60

actgctgagg gctttgaact tagtgttggg acaaatcatc tggggcattt cctcctctcg 120

cgcctgttgc ttgaggactt ggaaaaatcc gattaccctt caaagcgctt gatcatcgtt 180

ggttcaataa cagggaacac aaacacattg gctggtaatg tacctcccaa ggctaacctt 240

ggtgacttga ggggat 256

<210> 93
<211> 260
<212> nucleic acid
<213> Glycine max

<400> 93

cttcactgct gagggctttg aacttagtgt tgggacaaat catctggggc atttcctcct 60

ctcgcgcctg ttgcttgagg acttggaaaa atccgattac ccttcaaagc gcttgatcat 120

cgttggttca ataacaggga acacaaacac attggctggt aatgtacctc ccaaggctaa 180

ccttggtgac ttgaggggac ttcagggtgg tttgaatggg ctaaacagct cagccatgat 240

tgatggtgga gattcgatgg 260

<210> 94
<211> 274
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure

<222> (2),(27),(32),(37),(39)
<223> unsure at all n locations

<400> 94

cntaccttca ctgctgaggg ctttganctt antgttngng acaaattcat ctggggcatt 60

tcctcctctc gcgcctgttg cttgaggact tggaaaaatc cgattaccct tcaaagcgct 120

tgatcatcgt tggttcaata acagggaaca caaacacatt ggctggtaat gtactcccaa 180

ggctaacctt ggtgacttga ggggacttca gggtggtttg aatgggctaa acagctcagc 240

catgattgat ggtggagatt cgatggtgcc aagc 274

<210> 95
<211> 284
<212> nucleic acid
<213> Glycine max

<400> 95

cagtattgtg aaatgttgaa agcagacgag tggcctgttt gtgcatttat ttctcaagat 60

tgtcgtccag caaatccatc ggaagaagcg cacaatgttc aaacatcgta tgaagtgtgg 120

gagaagacat tagagatgat tggccttccc tcagatgctg tggaaaggct tttagatggg 180

gaagaagtta aatgccgtta tggacaagaa cagtaatcta atatacaata tctcccttaa 240

tctgtaaggg cacttccatt atttatagct agtaatgagc attt 284

<210> 96
<211> 265
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (41),(85)
<223> unsure at all n locations

<400> 96

aagagagaga tggcaacgac gacgtcgtct tcaagcgagg nagcaccgaa cactaagaag 60

aacaagaagg agcgtttagg ttggntagaa tggttaagag gttggttcta tttggtctac 120

gaaatgctct ttcagcgcat catggcgagc cacttgcaca accctatgcc tctccctcct 180

gtaaacgacc tcacttgcat tgtcaccggc tccaccagcg gcattggcct cgaaattgct 240

aggcaattgg ctcagtcagg ggccc 265

<210> 97
<211> 135
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (60),(116)
<223> unsure at all n locations

<400> 97

ggaaagaaca atggttggca gtaggtatac tacaagtaac tcctcaatcc catgtaagan 60

aacaaaaggc agcttcttta atgccagtat tgcacaacac ctcagactag tacaanaaaa 120

aacaaagaaa agggg 135

<210> 98
<211> 129
<212> nucleic acid
<213> Glycine max

<400> 98

ccatttgcca ttggatggcg ctgctagaat ttgtactggt gccaccagtt tcctctccct 60

ttatgtccca gatgagtacc caagtggcaa aaattagatt agactaatat atatatattg 120

ttttatcag 129

<210> 99
<211> 270
<212> nucleic acid
<213> Glycine max

<400> 99

gtccaggccc ggtggcggcg gtggcattag cagggtcctt caagacggtg ccgtttggga 60

aaaaggctgg ggttaatgcc cctgttgttt acggtgtcat gccacctgac gcatatcgtg 120

ctgccaaggg tgttcctacc gatcaaaaac ctggtcctgt gcctttcttc gctgctggaa 180

tcagctccgt tttacaccca aagaacccgt ttgcccctac cctacatttc aactatcgct 240

attttgaaac cgatgctcct aaagatgctc 270

<210> 100
<211> 264
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (47),(62)
<223> unsure at all n locations

<400> 100

aattgcgaag gggacgatat gttgaattca atttggtata tgatagnggt acaacatttg 60

gnctgaaaac tggagggaga atagagagta tacttgtttc tctcccactg actgctcggt 120

gggaatacga tcataaaccg gaagaaggaa gcgaagaatg gaaactcttg gacgcatgca 180

tcaaccccaa ggaatggatc taattcatca gttgaccccc caatttgtca gctttttaat 240

ttaataataa gggagcttgt ttct 264

<210> 101
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 101

ctcccttatt attaaattaa aaagctgaca aattgggggg tcaactgatg aattagatcc 60

attccttggg gttgatgcat gcgtccaaga gtttccattc ttcgcttcct tcttccggtt 120

tatgatcgta ttcccaccga gcagtcagtg ggagagaaac aagtatactc tctattctcc 180

ctccagtttt cagtccaaat gttgtacccc tatcatatac caaattgaat tcaacatatc 240

gtccccttc 249

<210> 102
<211> 262
<212> nucleic acid
<213> Glycine max

<400> 102

ggagatgctc ctttcctttg ctactgaatg tgcaaattct gttattcctg cttatttacc 60

tatcatagag aaaaggaagg atttgccctt caatgatcat cagaaagcat ggcaacaatt 120

gcgaagggga cgatatgttg aattcaattt ggtatatgat aggggtacaa catttggact 180

gaaaactgga gggagaatag agagtatact tgtttctctc ccactgactg ctcggtggga 240

atacgatcaa aaccggaaga ag 262

<210> 103
<211> 240
<212> nucleic acid
<213> Glycine max

<400> 103

agatgctcct ttcctttgct actgaatgtg caaattctgt tattcctgct tatttaccta 60

tcatagagaa aaggaaggat ttgcccttca atgatcatca gaaagcatgg caacaattgc 120

gaaggggacg atatgttgaa ttcaatttgg tatatgatag gggtacaaca tttggactga 180

aaactggagg gagaatagag agtatacttg tttctctccc actgactgct cggtgggaat 240

<210> 104
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 104

acggctgcga gaagacgaca gaaggggatg atcttaatga ctatgatcag gagatgctcc 60

tttcctttgc tactgaatgt gcaaattctg ttattcctgc ttatttacct atcatagaga 120

aaaggaagga tttgcccttc aatgatcatc agaaagcatg gcaacatttg cgaacgggga 180

cgatatgttg aattcaattt ggtatatgat aggggtacaa catttggact gaaaactgga 240

gggagaata 249

<210> 105
<211> 250
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (8),(15),(22),(28),(34),(39),(43),(46)...(47),(57),(69),
(106),(136),(143),(147),(163),(173),(183)
<223> unsure at all n locations

<400> 105

aattgcgnag gggangatat gntgaatnca attnggtana tgntannggt acaacanttg 60

gactgaatnc tggaggggag aatagagagt atacttgttt ctctcncact gactgctcgg 120

tgggaatacg atcatnaacc ggnagangga agcgaagact ggnaactctt ggncgcatgc 180

atnaacccca aggaatggat ctaattcatc agttgacccc ccaatttgtc agctttttaa 240

tttaataata 250

<210> 106
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 106

ggatttgccc ttcaatgatc atcagaaagc atggcaacaa ttgcgaaggg gacgatatgt 60

tgaattcaat ttggtatatg ataggggtac aacatttgga ctgaaaactg gagggagaat 120

agagagtata cttgtttctc tcccactgac tgctcggtgg gaatacgatc ataaaccgga 180

agaaggaagc gaagaatgga aactcttgga cgcatgcatc aaccccaagg aatggatcta 240

attcatcagt tgacccccca atttgtca 268

<210> 107
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 107

acggctgcga gaagacgaca gaaggggaga aaaggaagga tttgcccttc aatgatcatc 60

agaaagcatg gcaacaattg cgaaggggac gatatgttga attcaatttg gtatatgata 120

ggggtacaac atttggactg aaaactggag ggagaataga gagtatactt gtttctctcc 180

cactgactgc tcggtgggaa tacgatcata aaccggaaga aggaagcgaa gaatggaaac 240

tcttggacgc atgcatcaac cccaagga 268

<210> 108
<211> 321
<212> nucleic acid
<213> Glycine max

<400> 108

ggaagacctt atcatctccg aatttcattt tcagaagcct ctttgggaat caaatccgaa 60

gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttccct tttctctctg 120

gctccgcttc cactactcca actgcgatct cgctcactaa gcgcagttgg aagccacctc 180

cgagcatggc aaaaggccca gtcagagcca ccgtttctat agagaaagag accccggagg 240

ccaatcgtcc cgaaacgttt ctcagaggag tggacgaggc ccagtcttcc acttcggttc 300

gggcccgctt cgagaagatg a 321

<210> 109
<211> 282
<212> nucleic acid
<213> Glycine max

<400> 109

cacatccgaa gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttccct 60

tttctctctg gctccgcttc cactactcca actgcgatct cgctcactaa gcgcagttgg 120

aagccacctc cgagcatggc aaaaggccca gtcagagcca ccgtttctat agagaaagag 180

accccggagg ccaatcgtcc cgaaacgttt ctcagaggag tggacgaggc ccagtcttcc 240

acttcggttc gggcccgctc tcgagaagat gataagggac gc 282

<210> 110
<211> 260
<212> nucleic acid
<213> Glycine max

<400> 110

ccttatcatc tccgaatttc attttcagaa gcctctttgg gaatcaaatc cgaagcatga 60

tgcattgtgc gagcattgtc tcggctccgt cctacgcgtt ccctttttctc tctggctccg 120

cttccactac tccaactgcg atctcgctca ctaagcgcag ttggaagcca cctccgagca 180

tggcaaaagg cccagtcaga gccaccgttt ctatagagaa agagaccccg gaggccaatc 240

gtcccgaaac gtttctcaga 260

<210> 111
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 111

ctctttggga atcaaatccg aagcatgatg cattgtgcga gcattgtctc ggctccgtcc 60

tacgcgttcc cttttctctc tggctccgct tccactactc caactgcgat ctcgctcact 120

aagcgcagtt ggaagccacc tccgagcatg gcaaaaggcc cagtcagagc cacgtttcta 180

tagagaaaga taccccggag gccaatcgtc ccgaaacgtt tctcagagga gtggacgagg 240

cccagtcttc cacttcggtt cgggcccgc 269

<210> 112
<211> 260
<212> nucleic acid
<213> Glycine max

<400> 112

tgtgcgagca ttgtctcggc tccgtcctac gcgttccctt ttctctctgg ctccgcttcc 60

actactccaa ctgcgctctc gctcactaag cgcagttgga agccacctcc gagcatggca 120

aaaggcccag tcagagccac cgtttctata gagaaagaga ccccggaggc caatcgtccc 180

gaaacgtttc tcagaggagt ggacgaggcc cagtcttcca cttcggttcg ggcccgcttc 240

gagaagatga taagggaggc 260

<210> 113
<211> 279
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (26),(35),(52)...(53),(57)...(59),(74),(81),(148),
(186)
<223> unsure at all n locations

<400> 113

gaagacttta tcatttccga atttcntttt cagangcctc tttgggaatc anntccnnng 60

catgatgcat tgtngcgagc nttgtctacg gctccgtcct acgcgttccc ttttcgctct 120

ggctccgctt ccactactcc aactgcgntc tcgctcacta agcgcagttg gaagccacct 180

ccgagnatgg caaaaggccc agtcagagcc accgtttcta tagagaaaga gaccccggag 240

gccaatcgtc ccgaaacgtt tctcagagga gtggacgag 279

<210> 114

<211> 247
<212> nucleic acid
<213> Glycine max

<400> 114

ctccgaattt cattttcaga agcctctttg ggaatcaaat tggagtgtct gcaatccact 60

ccgaagcatg atgcattgtg cgagcattgt ctcggctccg tcctacgcgt tccctttcg 120

ctctggctcc gctctccact actccaactg cgatctcgct ctctaagcgc agttggaagc 180

cacctccgag catggcaaaa gcccagtcag agccaccgtt tctatagaga aagagacccc 240

ggaggcc 247

<210> 115
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 115

cagaagcctc tttgggaatc aaatccgaag catgatgcat tgtgcgagca ttgtctcggc 60

tccgtcctac gcgttccctt ttctctctgg ctccgcttcc actactccaa ctgccctctc 120

gctcactacg cgcagttgga agccacctcc gagcatggca aaaggcccag tcagagccac 180

cgtttctata gagatagaga ccccggaggc caatcgtccc gaaacgtttc tcagaggagt 240

ggacgaggcc cag 253

<210> 116
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 116

tcgagcgcgt tccctttttct ctctggctcc gcttccacta ctccacatgc gctctcgctc 60

actaagcgca gttggaagcc acctccgagc atggcaaaag gcccagtcag agccaccgtt 120

tctatagaga aagagacccc ggaggccaat cgtcccgaaa cgtttctcag aggagtcgtc 180

gaggcccagt cttccacttc ggttcgggcc cgcttcgaga agatgataag ggaggcccag 240

gacaccgtgt gcagtgccct cgaggccg 268

<210> 117

<211> 238
<212> nucleic acid
<213> Glycine max

<400> 117

atccgaagca tgatgcattg tgcgagcatt gtctcggctc cgtcctacgc gttccctttt 60

ctctctggct ccgcttccac tactccaact gcgatctcgc tcactaagcg cagttggaag 120

ccacctccga gcatggcaaa aggcccagtc agagccaccg tttctataga gaaagacacc 180

ccggaggcca atggtcccga aacgtttctc agaggagtgg acgaggccca ttcttcca 238

<210> 118
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 118

tccgaagcat gatgcattgt gcgagcattg tctcggctcc gtcctacgcg ttccctttc 60

tctctggctc cgcttccact actccaactg ccctctcgct cactaagcgc agttggaagc 120

cacctccgag catggcaaaa ggaccagtca gagccaccgt ttctacagag acagagaccc 180

cggaggccaa tcgtcccgaa acgtttctca gaggagtgga cgaggccaag tcttccactt 240

cggttcgggc 250

<210> 119
<211> 267
<212> nucleic acid
<213> Glycine max

<400> 119

actcgagccg attcggctcg agctctttgg gaatcaaatc cgaaacatga tgcattgtgc 60

gaccattgtc tcggctccgt cactacgcgt tccctttct ctctggctcc gcttccacta 120

ctccaactac tactctcgct cactaagcgc agttggaagc cacctccgag catggcaaaa 180

ggcccagtca gagccaccgt ttctatagag acagacaccc cggaagccaa ttctcccgaa 240

acgtttctca gacgactgga cgaggcc 267

<210> 120
<211> 119
<212> nucleic acid

<213> Glycine max

<400> 120

tcattttcag aagcctcttt gggaatcaaa tccgaagcat gatgcattac gcgagcattg 60

tctcggctcc gtcctacgcg ttccctttc tctctggctc cgcttccaca caacatacg 119

<210> 121
<211> 117
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (56)
<223>

<400> 121

cgaatttcat tttcagaagc ctctttggga atcaaatccg aagcatgatg cattgngcga 60

gcattgtctc ggctccgtcc tacgcgttcc cttttctctc tggctccgct tccacaa 117

<210> 122
<211> 94
<212> nucleic acid
<213> Glycine max

<400> 122

caaatccgaa gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttccct 60

tttctctctg gctccgcttc cacacaacat acga 94

<210> 123
<211> 81
<212> nucleic acid
<213> Glycine max

<400> 123

cattttcaga agcctctttg ggaatcaaat ccgaagcatg atgcattgtg cgagcattgt 60

ctcggctccg tcctacgcgt t 81

<210> 124
<211> 246
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (23),(78)
<223> unsure at all n locations

<400> 124

cgagacccgg aggccaatcg tcncgaaacg tttctcagag gagtggacga gtgccagtct 60

tccacttcgg ttcgggcntc gttcgagaag atgataaagg gaggcccagg acaccgtgtg 120

cagtgccctc gaggccgctg atggtggggc ccagttcaag gaggacgttt ggtccaggcc 180

cggtggcggc ggtggcatta gcagggtcct tcaagacggt gccgtttggg agaaggctgg 240

ggttaa 246

<210> 125
<211> 261
<212> nucleic acid
<213> Glycine max

<400> 125

gaaagagacc ccggaggcca atcgtcccga aacgtttctc agaggagtgg acgaggccca 60

gtcttccact tcggttcggg cctgcttcga gaagatgata agggaggccc aggacaccgt 120

gtgcagtgcc ctcgaggccg ctgatggtgg ggcccagttc atggaggacg tttggtccag 180

gcccggtggc ggcggtggca ttagcagggt ccttcaagac ggtgccgttt gggagaaggc 240

tggggttaat gtctctgttg t 261

<210> 126
<211> 239
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (184)...(185)
<223> unsure at all n locations

<400> 126

accaatcgtc ccgaaacgtt tctcagagga gtggacgagg cccagtcttc cacttcggtt 60

cgggcccgct tcgagaagat gataagggag gcccaggaca ccgtgtgcag tgccctcgag 120

gccgctgatg gtggggccca gttcaaggag gacgtttggt ccaggcccgg tggcggcggt 180

ggcnncagca ggtccttcaa gacggtgccg tttgggagaa ggctggggtt aatgtctct 239

<210> 127
<211> 162
<212> nucleic acid
<213> Glycine max

<400> 127

atcaagtgct tgttatgatg agtcagaatg ttagcttgtt gtactaggtg gattgtaaat 60

cacgtatttt gctagagtca tccgcgtaaa gcgtgaaaat gcagaaaatt acaaatgtct 120

aggctgcgtc tgtagtatac ctactgccaa ccattgttct tt 162

<210> 128
<211> 114
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (79),(98)
<223> unsure at all n locations

<400> 128

atcaagtgct tgttcatgat ggtcagaatg ttagcttgtt gtactaggtg gattgtaaat 60

cacgtatctt gctagagtnc tccgcgcgga gcgtgaanat gcagagaatt acaa 114

<210> 129
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 129

ggcgtctgcc aaaaccaaaa ggtcagactg ttggatcttt ccggaaggga cttaccatgt 60

tgcctgatgc aatttctgcc agactaggca acaaagtaaa gttatcttgg aagctttcaa 120

gtattagtaa actggatagt ggagagtaca gtttgacata tgaaacacca gaaggagtgg 180

tttctttgca gtgcaaaact gttgtcctga ccattccttc ctatgttgct agtacatgcc 240

tgcgtcctct gtc 253

<210> 130

<211> 298
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (64)
<223>

<400> 130

gctgcagatg cactttcaaa gttttattac cctccagttg ctgcagtttc catatcctat 60

ccanaagaag ctattagatc agaatgcttg atagatggtg agttgaaggg ggttggtcaa 120

ttgcatccac gtagacaagg agtggaaaca ttaggaacta tatacagctc atcactattc 180

cccaaccgag caccacgacg gaaggttcta ctcttgaatt acattggagg agcaactaat 240

actggaattt tatcgaagac ggacagtgaa cttgtggaaa cagttgatcg agatttga 298

<210> 131
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 131

caattatata taatctcctg ctgactcgtc tttttctttg gaataatgat atactgtcaa 60

aaaccatata taatctcctg ctgacacatc tttttctttt cttttcttta tatcattttc 120

cttattagtt tctttgttta ctgcagtgac gagcttagga aaattgttac ttctgacctg 180

agaaagttgt tgggagcaga gggggaacca acatttgtta accatttcta ttggagtaaa 240

ggctttcctt tgtatggacg taactatggg tcagttctta agc 283

<210> 132
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 132

tgacaatttt gatgatagag gtggataata aagctgcagt ccttggttat atcggggcac 60

cgctcactct ggcatcacat gtgattgaag gtggttcatc accaaacttc tcgcaaataa 120

agagattggc tttctcagca tccaagatcc tgcactcgtt actgcagaag tttacgacat 180

ctctggcgag atacattctc taccaagctg acaatggagc tcaagctgtt cagatctttg 240

attcatgggc 250

<210> 133
<211> 235
<212> nucleic acid
<213> Glycine max

<400> 133

tgacaatttt gaggaaagag gtggataata aagctgcagt ccttggtttt gtcggggcac 60

cgttcactct ggcatcatat gtggttgaag gtggttcatc aaaaaacttc tcaaaaataa 120

agagattggc tttctcagaa tccaagatcc tgcactcgtt actgcagaag tttacaacat 180

caatggcaag atacattcaa taccaagctg acaatggagc tcaagctgtt cagat 235

<210> 134
<211> 282
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (73),(142)
<223> unsure at all n locations

<400> 134

gtggacaact accacctgaa atgtgggaac gctggtcaaa gccttatatc aaagagattg 60

taaatttggt cangaaaaaa tgccctgggg taccaattgt tctttatata aacggaaatg 120

gtggtcttct tgagcgtatg anagacaccg gagttgatgt tatagggcta gactggacag 180

tggatatggc agatggaaga agaagattgg gtagtgggat aggtgttcag ggaaatgtgg 240

accctgccta cttattctcc cctcttgatg ccctgactga ag 282

<210> 135
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 135

gggggatcct gttagtcgtc ctccggcatg gatgatgcgc caggccggaa ggtacatggc 60

tgtttacaaa aagcttgctg agaaatatcc atccttccga gagaggtcag agacaactga 120

tctcattgtg gaaatttctt tgcagccttg gaatgcttc aggcctgatg gagtaattat 180

cttctcggac atccttacac cacttcctgc gtttggagtt gattttgaca tagaagaagt 240

aaggggacct gttata 256

<210> 136
<211> 386
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (186)
<223>

<400> 136

ttcaggctca gccgcatagt taaggaaccg aaactccaca taggaatcac ttggtttctt 60

tgctctcccc caacccaatg gctacttcca ttaacagcag tgctctgggg tggaaacatt 120

catccttctt cgtacaatcc aataatggct tcaacgttgc ttcgcctcct ttcaaaccaa 180

agccgncacg ctcctccaac ttttctctct attgctctgc cgcctcctct tcttctgatc 240

cactgttggt taaggctgct aggggagatc ctgttagtcg tcctccagca tggatgatgc 300

gccaggcagg aaggtacatg gctgtttaca aaaatcttgc tgagaaatat ccatccttcc 360

gagagaggtc agagacaact gaactc 386

<210> 137
<211> 291
<212> nucleic acid
<213> Glycine max

<400> 137

aggttttaca tccaattgac ctggacaggc ttaaatttgt tggagattca ctaaagatac 60

tgcgccaaga ggttggtggt catgcagctg ttttgggttt tgtgggagca ccttggacaa 120

tagcaacata tatagtggaa gggggtacaa cacgcacata tacaaccatt aagagcatgt 180

gccacactgc cccacatgta ttgaggactt tgctttctca tttgacgcag gcaatagctg 240

attacgttat tttccaagtg gagtctgggg ctcattgcat acaaatattt g 291

<210> 138
<211> 288

<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (239),(241)
<223> unsure at all n locations

<400> 138

gcgccaagag gttggtggtc atgcagctgt tttgggtttt gtgggagcac cttgggacaa 60

tagcaacata tatagtggaa gggggtacaa cacgcacata tacaaccatt aagagcatgt 120

gccacactgc cccacatgta ttgaggactt tgctttctca tttgacgcag gcaatagctg 180

attacgttat tttccaagtg gagtctgggg ctcattgcat acaaatattt gattcatgnc 240

ngtggacaat accacctgaa atgtgggaac gctggtcaaa gccttata 288

<210> 139
<211> 261
<212> nucleic acid
<213> Glycine max

<400> 139

aaagatactg cgccaagagg ttggtggtca tgcagctgtc ttgggttttg tgggagcacc 60

ttggacaata gcaacatata tagtggaagg gggtacaaca cgcacatata caaccattaa 120

gagcatgtgc cacactgccc cacatgtatt gaggactttg ctttctcatt tgacgcaggc 180

aatagctgat tacgttattt tccaagtgga gtctggggct cattgcatac aaatattaga 240

tcatggggtg gacaactacc a 261

<210> 140
<211> 213
<212> nucleic acid
<213> Glycine max

<400> 140

gacaatagca acatatatag tggaaggggg tacaacacgc acatatacaa ccattaagag 60

catgtgccac actgccccac atgtattgag gactttgctt tctcatttga cgcaggcaat 120

agctgattac gttattttcc aagtggagtc tggggctcat tgcatacaaa tatttgattc 180

atggggtgga caactaccac ctgaaatgtg gga 213

<210> 141
<211> 236
<212> nucleic acid
<213> Glycine max

<400> 141

tgttgaaaga cccccggttt ggctcatgag gcaagcaggg aggtacatga agagttacca 60

aaccatctgt gagaaatatc cttcattccg tgaaagatct gaaaatgttg atctcgtggt 120

ggaaatttct ctgcaaccat ggcatgtttt taagcccgat ggagtgattt tattctcaga 180

cattcttacc ccactttctg gaatgaatat acccttttgat attgtgaagg gtaagg 236

<210> 142
<211> 263
<212> nucleic acid
<213> Glycine max

<400> 142

tttggctcat gaggcaagca gggaggtaca tgaagagtta ccaaaccatc tgtgagaaat 60

atccttcatt ccgtgaaaga tctgaaaatg ttgatctcgt ggtggaaatt tctctgcaac 120

cgtggcatgt tttcaagcct gatggagtga ttttattctc agacattctt accccacttt 180

ctggaatgaa tataccctttt gatattgtga agggtaaggg tcctgttata tttgatccta 240

ttcacacatc tgcccaggtt gat 263

<210> 143
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 143

gcttttgcta aatgcagttc gcgggataga tgttgaaaga cccccggttt ggctcatgag 60

gcaagcaggg aggtacatga agagttacca aaccatctgt gagaaatatc cttcattccg 120

tgaaagatct gaaaatgtga tctcgtggtg gaaatttctc tgcaaccgtg gcatgttttc 180

aagcctgatg gagtgatttt attctcagac attcttaccc cactttctgg aatgaatata 240

ccctttgata ttgtgaag 258

<210> 144

<211> 262
<212> nucleic acid
<213> Glycine max

<400> 144

caaacatgct ttgcgtcaac actgccttca cctctttctt gcccagaaaa tcaatttgct 60

tcttttcctc caaatcaacc accccaattt cctgcaccct ccaaggaaca gttgcagaac 120

caaaatctac agctgctggt gaacctcttt tgctaaatgc agttcgtggg atagatgttg 180

aaagaccccc ggtttggctc atgaggcaag cagggaggta catgaagagt taccaaacca 240

tctgtgagag atatccttca tt 262

<210> 145
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 145

acttgttatc tatacagatg ttgcattaga tccttattca tcagatgggc atgatggcat 60

agttagagaa gatggagtta ttatgaatga tgagacagtt catcagctat gtaaacaagc 120

tgtagcccag gcccaagctg gagcagatgt tgtccagtct agtgatatga tggatggtcg 180

ggtaggagca ctgcgtgcag ctctggatgc tgaaggcgtt cagcatgtat ctataatgtc 240

ctatacagca aagtatgcaa gttcttttta tggtccattt aga 283

<210> 146
<211> 316
<212> nucleic acid
<213> Glycine max

<400> 146

ctgagatgcg ggaggatgaa tctgaaggag ctgacattct cttggtgaag cctggtcttc 60

cttacttgga tatcataagg ctgctcaggg ataattctcc tttgccaatt gcagcatacc 120

aggtttctgg tgaatatgca atgataaagg ctgccggtgc tctcaaaatg atagacgaag 180

aaaaggttat gatggagtca ctgatgtgcc tccgaagggc cggtgctgat atcatcctca 240

catattctgc tctgcaagct gccagatgtt tgtgtggaga gaagagtgaa gttctctgat 300

tatgtagggc gttgtt 316

09523218.012099

<210> 147
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 147

tcgccggtaa ggttccgccg gcgcctcccg tgccgcccag accggcggct cccggttgga 60

acaccggtgg ttccttcact tccacaccac cggcgtcctc gtcggaaccg gaagtcgccg 120

gcgcttcggt cggcttttca ggaaacgagc atttcgccgg cgaatttcgt gtatccgctt 180

ttcattcacg aaggtgaaga ggatactcca attggggcta tgcctggatg ctacaggctt 240

gggtggaggc atggacttgt agaagaggtt g 271

<210> 148
<211> 275
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (168),(192)
<223> unsure at all n locations

<400> 148

aagcctggtc ttccttactt ggatatcata agtctgctca gggataattc tcctttgcca 60

attgcagcat accaggttct tttctttgcc cattctagca ctaggcaaaa cgtttctgat 120

aaaaagttga tcagatattc aatacatttt aaccagtgga attctgcntt aagcttgctg 180

caagtgacag angtctatac gtagtagaca aatatcacac ctctagttta atatcaggct 240

gaggtacaag tttatggttg ctttaacagt tattg 275

<210> 149
<211> 191
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (122),(126),(133),(138),(140),(142),(147)...(149),
(152)...(153),(169),(181),(184),(189)
<223> unsure at all n locations

<400> 149

ccggtgctga tatcatcctc acatattctg ctctgcaagc tgccagatgt ttgtgtggag 60

agaagaggtg aagttctctg attatgcagg gcgttgttca tgtagaaggt tgaagagttt 120

anaaanccca gtnccggngn tncgggnnnt cnnaaaattt taaaagggnc cccgcggttt 180

ntcnaaaang a 191

<210> 150
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 150

aggagatgaa gcatacagtg aaaatggttt agtgcctcgg acaatacgtt tgctcaagga 60

taagttacca gaccttggta accaatccag aggtggaata aaatcctaat ccgtcagatg 120

ggcatgatgg catagtaaga gaagatgaag taataatgat tatgagacag gtcatcagcc 180

atggtaacaa gctgtagacc aaggccaagc tggagcagat gttgtcagtc ctagtgatat 240

gatggatggt 250

<210> 151
<211> 357
<212> nucleic acid
<213> Glycine max

<400> 151

acggctgcga caagacgaga taatgtggct gattggtaac gtagtgaatc ctgtgcatac 60

atccgctcgt agcctcttcc tgcgactctc ttctcagtgg gtctccgtat tctccctcaa 120

tcctattaac cttttcttct ttcatttccc accccattct ataatcaatc agtgtcaatg 180

gcttcttcaa tcgctaatgc gccttctgcg ttcaattctc agtactactt tggtctcaga 240

acgccactga ggtccttcaa cttttcttct cctcaagctg ccaaacttcc acgctcgcat 300

tgccttttcg tcgtcagagc ctccgattcg gtcttcgaaa ccgccgttgt cgccggt 357

<210> 152
<211> 418
<212> nucleic acid
<213> Glycine max

<400> 152

agcccaggcg tcagtacggc tgcgagaaga cgacagaagg ggatggttga ctggttgttt 60

tttaaattgc atgaaacatt tatttgttct tatagaaaaa gttacaagta agtcttcact 120

gcaagtagaa gatattggat ccagttccag ggttgaactc catacgatta ttttttaata 180

gaaaaattga ctgtgacgta gctgtggagg acacgattgg taaagtattg aatccttcct 240

gcgactcttt tctcattggt tcactgtgtt ctccaaacac atctcagaat ctcttgtatt 300

attattcaat caatcaatgg cttcttcaat ccctaatgga cctccctctg cgttgaattc 360

ccagttctac gatgatctca gaccgccaca gaggaccttc aacttttcct ttcttcaa 418

<210> 153
<211> 243
<212> nucleic acid
<213> Glycine max

<400> 153

agcccaagcg tcagtacagc tgcgagagga ggacagaagg ggattctaca atcaatcaat 60

ggcaatggct tcatcaatcc ctaatgcgcc ttctgcgttc aattctcaaa gctacgttgg 120

tctcaggtcg ccactgagga ccttcaactt ttcttctcct caaggtggca aaaatcctcg 180

ctcccaacgc cttttcgacg tcagagcctc cgaatccgag ttccaagccg ccgttgtccc 240

cgg 243

<210> 154
<211> 277
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (8),(14),(28),(31),(49),(57),(67),(69),(80),
(123)...(124),(152),(174),(199),(235)...(237),(242),
(275)
<223> unsure at all n locations

<400> 154

cgcagtcnga ggancctcca cagatatnca nctcttaatg tgcaggaana tttccgnggc 60

aatgtcnana caaggttaan aaagctcaat gaggggttg tccaagctac actattagca 120

ttnnctggac tcaaacgctt aatatgacag anaatgtgac ttcaatccta tcantagatg 180

atatgcttcc agctgttgnc caaggtgcca ttggaattgc ctgtagaagt gatgnnnata 240

anatggcaga atacattgat tcacttaatc atganga 277

<210> 155
<211> 285
<212> nucleic acid
<213> Glycine max

<400> 155

tatgagatga agcatacagt gaaaatggtt tagtgcctcg gacaatacgt ttgctcaagg 60

ataagtaccc agaccttgtt atctatacag atgttgcatt agatccttat tcgtcagatg 120

ggcatgatgg catagttaga gaagatggag ttattatgaa tgatgagaca gttcatcagc 180

tatgtaaaca agctgtagcc caggcccaag ctggagcaga tgttgtcagt cctagtgata 240

tgatggatgg tcgggtagga gcactgcgtg cagctcttga tgctg 285

<210> 156
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 156

acggctgcga gaagacgaca gaaggggatg ctttgaagtc tcccacagga gatgaagcat 60

acaatgaaaa tggtttagtg cctcgaacaa tacgtttgct caaggataag tacccagacc 120

ttgttatcta tacagatgtt gcattagatc cttattcatc agatgggcat gatggcatag 180

ttagagaaga tggagttatt atgaatgatg agacagttca tcagctatgt aaacaagctg 240

tagcccaggc ccaagctgga gcagatgttg tcagt 275

<210> 157
<211> 262
<212> nucleic acid
<213> Glycine max

<400> 157

ttttagtctc ccacaggaga tgaagcatac aatgaaaatg gtttagtgcc tcgaacaata 60

cgtttactca aggataagta cccagacctt gttatctata cagatgttgc attagatcct 120

tattcatcag atgggcatga tggcatagtt agagaagatg gagttattat gaatgatgag 180

acagttcatc agctatgtaa acaagctgta gcccaggtca tatgactgtc ttctataaac 240

attttcaact gtaggcagtt ac 262

<210> 158
<211> 289
<212> nucleic acid
<213> Glycine max

<400> 158

gaaaaggtta tgatggagtc actgatgtgc ctccgaaggc cggtgctgat atcatcctca 60

catattctgc tctgcaagct gccagatgtt tgtgtggaga gaagaggtga agttctctga 120

ttatgtaggg cgttgttcat gtagaaggtt gaagagttta taataccagt atctgctgga 180

ttttggttat tgtaaattgt ttaagaggga catggaggtt tgtgtataga gagacattca 240

taataaaata ttatggcctc gtttgattta atatatgtaa ggacataat 289

<210> 159
<211> 255
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (212)
<223>

<400> 159

ggttatgatg gagtcactga tgtgcctccg aagggccggt gctgatatca tcctcacata 60

ttctgctctg caagctgcca gatgtttgtg tggagagaag aggtgaagtt ctctgattat 120

gtagggcgtt gttcatgtag aaggttgaag agtttataat accagtatct gctggatttt 180

ggttattgta aattgtttaa gagggacatg gnggtttgtg tatagagaga cattcctaat 240

taaatattag ggccc 255

<210> 160
<211> 262
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (10),(92)

<223> unsure at all n locations

<400> 160

tcgggtaggn gcactgcgtg cagctctgga tgctgaaggc tttcagcatg tttctataat 60

gtcctataca gcaaagtatg caagttcttt tnatggtcca tttagagagg cactagactc 120

aaaccccccgg tttggagaca agaaaactta tcagatgaac ccagctaatt acagagaggc 180

tctgactgag atgcgggagg atgaatctga aggagctgac attctcttgg tgaagcctgg 240

tcttccttac ttggatatca ta 262

<210> 161
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 161

gacagttcat cagctatgta aacaagctgt agcccaggcc caagctggag cagatgttgt 60

cagtcctagt gatatgatgg atggtcgggt aggagcactg cgtgcagctc tggatgctga 120

aggctttcag catgtttcta taatgtccta tacagcaaag tatgcaagtt ctttttatgg 180

tccatttaga gaggcactag actcaaaccc ccggtttgga gacaagaaaa cttatcagat 240

gaacccagct aat 253

<210> 162
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 162

gttgtcagtc ctagtgatat gatggatggt cgggtaggag cactgcgtgc agctctggat 60

gctgaaggct ttcagcatgt ttctataatg tcctatacag caaagtatgc aagttctttt 120

tatggtccat ttagagaggc actagactca aacccccggt ttggagacaa gaaaacttat 180

cagatgaacc cagctaatta cagagaggct ctgactgaga tgcgggagga tgaatctgaa 240

ggagctgac 249

<210> 163
<211> 248
<212> nucleic acid

<213> Glycine max

<400> 163

gacagttcat cagctatgta aacaagctgt agcccaggcc caagctggag cagatgttgt 60

cagtcctagt gatatgatgg atggtcgggt aggagcactg cgtgcagctc tggatgctga 120

aggctttcag catgtttcta taatgtccta tacagcaaag tatgcaagtt ctttttatgg 180

tccatttaga gaggcactag actcaaaccc ccggtttgga gacaagaaaa cttatcagat 240

gaacccag 248

<210> 164
<211> 414
<212> nucleic acid
<213> Glycine max

<400> 164

acccacgcgt ccgtacggct ggagaagacg acagaagggg attctataat caatcaatgg 60

caatggcttc ttcaatccct aatgcgcctt ctgcgttcaa ttctcagagc tacgttggtc 120

tcagagcgcc actgaggacc ttcaactttt cttctcctca agctgccaaa attcctcgct 180

cccaacgcct tttcgtcgtc agagcctccg attcggagtt cgaagccgcc gttgtcgccg 240

gtaaggttcc gccggcgcct cccgtgccgc ccagaccggc ggctccggtt ggaacaccgg 300

tggttccttc acttccactt caccggcgtc ctcgtcggaa ccggaagtcg ccggcgcttc 360

ggtcggcttt tcaggaaacg agcatttcgc cggcgaattt cgtgtatccg cttt 414

<210> 165
<211> 394
<212> nucleic acid
<213> Glycine max

<400> 165

tacggctgcg agaagacgac agaaggggat aatcaatcaa tggcaatggc ttcttcaatc 60

cctaatgcgc cttctgcgtt caattctcag agctacgttg gtctcagagc gccactgagg 120

accttcaact tttcttctcc tcaagctgcc aaaattcctc gctcccaacg ccttttcgtc 180

gtcagagcct ccgattcgga gttcgaagcc gccgttgtcg ccggtaaggt tccgccggcg 240

cctcccgtgc cgcccagacc ggcggctccg gttggaacac cggtggttcc ttcacttcca 300

cttcaccggc gtcctcgtcg gaaccggaag tcgccggcgc ttcggtcggc ttttcaggaa 360

acgagcattt cgccggcgaa tttcgtgtat ccgc 394

<210> 166
<211> 283
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (158),(185)
<223> unsure at all n locations

<400> 166

gcttcttcaa tccctaatgc gccttctgcg ttcaattctc agagctacgt tggtctcaga 60

gcgccactga ggaccttcaa cttttcttct cctcaagctg ccaaaattcc tcgctcccaa 120

cgcctttttcg tcgtcagagc ctccgattcg gagttcgnag ccgccgttgt cgccggtaag 180

gttcncccgg cgcctcccgt gccgcccaga ccggcggctc cggttggaac accggtggtt 240

ccttcacttc cacttcaccg gcgtcctcgt cggaaccgga agt 283

<210> 167
<211> 286
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (156),(183),(193)
<223> unsure at all n locations

<400> 167

aatccctaat gcgccttctg cgttcaattc tcagagctac gttggtctca gagcgccact 60

gaggaccttc aacttttctt ctcctcaagc tgccaaaatt cctcgctccc aacgcctttt 120

cgtcgtcaga gcctccgatt cggagttcga agccgncgtt gtcgccggta aggttccgcc 180

ggngcctccc gtnccgccca gaccggcggc tccggttgga acaccggtgg ttccttcact 240

tccacttcac cggcgtcctc gtcggaaccg gaagtcgcgg cgcttt 286

<210> 168
<211> 278
<212> nucleic acid

<213> Glycine max

<400> 168

cttcaatccc taatgcgcct tctgcgttca attctcagag ctacgttggt ctcagagcgc 60

cactgaggac cttcaacttt tcttctcctc aagctgccaa aattcctcgc tcccaacgcc 120

ttttcgtcgt cagagcatcc gattcggagt tcgaagccgc cgttgtcgcc ggtaaggttc 180

cgccggcgcc tcccgtgccg cccagaccgg cggctccggt tggaacaccg gtggttcctt 240

cacttccact tcaccggcgt cctcgtcgga accggaag 278

<210> 169
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 169

ggcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120

acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180

ggttccgccg gcgcctcccg tgccgcccag accggcggct ccggttggaa caccggtggt 240

tccttcactt ccacttcacc ggcgtcct 268

<210> 170
<211> 356
<212> nucleic acid
<213> Glycine max

<400> 170

attgaatcct gtgcatacat cctcacttat cctcttcctg cgactctctt ctcattggtt 60

ctccgtattc tccctcaatc ctattaacct tttcttcttt catttcccac cccattctat 120

aatcaatcaa tggcaatggc ttcttcaatc cctaatgcgc cttctgcgtt caattctcag 180

agctacgttg gtctcagagc gccactgagg accttcaact tttcttctcc tcaagctgcc 240

aaaattcctc gctcccaacg cctttcgtc gtcagagcct ccgattcgga gttcgaagcc 300

gccgttgtcg ccggtaaggt tccgccggcg cctcccgtgc cgcccagacc ggcggc 356

<210> 171

<211> 287
<212> nucleic acid
<213> Glycine max

<400> 171

gcttcttcaa tccctaatgc gccttctgct gttcaatgtc tcgagagctc acgttcgggt 60

ctccagcagc gaccacttgc aggacgcttg cagacgtttt gcttagctcc tacgaagctt 120

ggcgcaaata ttgcctgcgc tacccatacg ccttttacgt cgtcagagcc tccgattcgg 180

agttcgaagc cgccgttgtc gccggtaagg ttccgccggc gcctcccgtg ccgcccagac 240

cggcggctcc ggttggaaca ccggtggttc cttcacttcc acttcac 287

<210> 172
<211> 259
<212> nucleic acid
<213> Glycine max

<400> 172

atggcaatgg cttcttcaat ccctaatgcg ccttctgcgt tcaattctca gagctacgtt 60

ggtctcagag cgccactgag gaccttcaac ttttcttctc ctcaagctgc caaaattcct 120

cgctcccaac gccttttcgt cgtcagagcc tccgattcgg agttcgaagc cgccgttgtc 180

gccggtaagg ttccgccggc gcctcccgtg ccgcccagac cggcggctcc ggttggaaca 240

ccggtggttc cttcacttc 259

<210> 173
<211> 258
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (203)
<223>

<400> 173

ggcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120

acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180

ggttccgccg gcgcctcccg tgncgcccag accggcggct ccggttggaa caccggtggt 240

tccttcattc cattcacc 258

<210> 174
<211> 234
<212> nucleic acid
<213> Glycine max

<400> 174

ggcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120

acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180

ggttccgccg gcgcctcccg tgccgcccag accggcggct ccggttggaa cacc 234

<210> 175
<211> 251
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (159),(178),(194),(201)
<223> unsure at all n locations

<400> 175

gcttcttcaa tccctaatgc gccttctgcg ttcaattctc agagctacgt tggtctcaga 60

gcgccactga ggaccttcaa cttttcttct cctcaagctg ccaaaattcc tcgctcccaa 120

cgccttttcg tcgtcagagc ctccgattcg gagttcgang ccgccgttgt cgccggtnag 180

gttccgccgg cgcntcccgt nccgcccaga ccggcggctc cggttggaac aaccggtggt 240

tccttcactt c 251

<210> 176
<211> 279
<212> nucleic acid
<213> Glycine max

<400> 176

atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag agcgccactg 60

aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca acgccttttc 120

gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa ggttccgccg 180

gcgcctcccg tgccgcccag accggcggct ccggttggaa caccggtggt tccttcactt 240

ccacttcacc ggcgtcctcg tcggaaccgg aagtcgccg 279

<210> 177
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 177

ggcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120

acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180

ggttccgccg gcgcctcccg tgccgcccag accggcggct ccggttggaa caccggtggt 240

tccttcactt ccacttcacc ggcgtc 266

<210> 178
<211> 287
<212> nucleic acid
<213> Glycine max

<400> 178

atcctattaa ccttttcttc tttcatttcc caccccattc tatagtcaat caatggcaat 60

ggcttcttca atccctaatg cgccttctgc gctcaattct cagagctacg ttggtctcag 120

agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 180

acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 240

ggttccgccg gcgcctcccg tgccgcccag accggcggct ccggttg 287

<210> 179
<211> 236
<212> nucleic acid
<213> Glycine max

<400> 179

caatggcaat ggcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg 60

ttggtctcag agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc 120

ctcgctccca acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg 180

tcgccggtac agttccgccg gcgctcccgt gccgcccaga ccggcggctc cggttg 236

<210> 180
<211> 395
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (295)
<223>

<400> 180

tacggatgcg agaagacgac agaaggggga ttggtaaagt attgaatcct gtgcatacat 60

cctcacttat cctcttcctg cgactctctt ctcattggtt ctccgtattc tccctcaatc 120

ctattaacct tttcttcttt catttcccac cccattctat aatcaatcaa tggcaatggc 180

ttcttcaatc cctaatgcgc cttctgcgtt caattctcag agctacgttg gtctcagagc 240

gccactgagg accttcaact tttcttctcc tcaagctgcc aaaattcctc gctcncaacg 300

ccttttcgtc gtcagagcct ccgattcgga gttcgaagcc gccgttgtcg ccggtaaggt 360

tccgccggcg cctcccgtgc cgcccagacc ggcgg 395

<210> 181
<211> 227
<212> nucleic acid
<213> Glycine max

<400> 181

tggcttcttc aatccctaat gcgccttctg cgttcaattc tcagagctac gttggtctca 60

gagcgccact gaggaccttc aacttttctt ctcctcaagc tgccaaaatt cctcgctccc 120

aacgcctttt cgtctcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180

ggttccgccg gcgcctcccg tgccgcccag accggcggct ccggttg 227

<210> 182
<211> 271
<212> nucleic acid
<213> Glycine max

<220>

<221> unsure
<222> (192),(199),(205),(222),(228),(254),(256),(266),(269)
<223> unsure at all n locations

<400> 182

ggcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctcgctccca 120

acgccttttc gtcgtcagag cctccgattc ggagttcgaa gcagccgttg tcgccggtaa 180

ggttccgccg gngcttccnt gccgnacaga ccggcgggtc cngttggnac aacggtggtt 240

ccttaattcc actnancggc gtcctntcng a 271

<210> 183
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 183

cggctcgaga aaattgactg tcacgtagct gaagctgatt gagctacgtt ggtctcagag 60

cgccactgag gaccttcaac ttttcttctc ctcaagctgc caaaattcct cgctcccaac 120

gcctttcga cgtcagagcc tccgattcgg agttcgaagc cgccgttgtc gccggtaagg 180

ttccgccggc gcctcccgtg ccgcccagac cggcggctcc ggttggaaca ccggtggttc 240

cttcacttcc acttca 256

<210> 184
<211> 246
<212> nucleic acid
<213> Glycine max

<400> 184

accttgtctt ctttcatttc ccaccccatt ctataatcaa tcaatggcaa ttgcttcttc 60

aatccctaat gcgccttctg cgttcaattc tcagagctac gttggtctca gagcgccact 120

gaggaccttc aactttgctt ctcctcaagc tgccaaaatt cctcgctccc aacgcctttt 180

cgtcgtcaga gcctccgatt cggagttcga agccgccgtt gtcgccggta agttccgccg 240

gcgctt 246

<210> 185

<211> 253
<212> nucleic acid
<213> Glycine max

<400> 185

cgactctctt ctcattggtt ctccgtattc tccctcaatc ctattaacct tttcttcttt 60

catttcccac cccattctat aatcaatcaa tggcaatggc ttcttcaatc cctaatgcgc 120

cttctgcgtt caattctcag agctacgttg gtctcagagc gccactgagg accttcaact 180

tttcttctcc tcaagctgcc aaaattcctc gctcccaacg ccttttcgtc gtcagagcct 240

ccgattcgga gtt 253

<210> 186
<211> 148
<212> nucleic acid
<213> Glycine max

<400> 186

ctgcgttcaa ttctcagagc tacgttggtc tcagagcgcc actgaggacc ttcaactttt 60

cttctcctca agctgccaaa attcctcgct cccaacgcct tttcgtcgtc agagcctccg 120

attcggagtt cgaagccgcc gttgtcgc 148

<210> 187
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 187

cggctcgagg ctgaagctga ttggtaaagt attgaatcct gtgcatacat cctcacttat 60

cctcttcctg cgactctctt ctcattggtt ctccgtattc tccctcaatc ctattaacct 120

tttcttcttt catttcccac ccattctata atcaatcaat ggcaatggct tcttcaatcc 180

ctaatgcgcc ttctgcgttc aattctcaga gctacgttgg tctcagagcg ccactgagga 240

ccttcaactt ttcttctcct caagctgcca a 271

<210> 188
<211> 104
<212> nucleic acid
<213> Glycine max

<400> 188

atggcttctt caatccctaa tgcgccttct gcgttcaatt ctcagagcta cgttggtctc 60

agagcgccac tgaggacctt caacttttct tctcctcaag ctgc 104

<210> 189
<211> 64
<212> nucleic acid
<213> Glycine max

<400> 189

agcttcttca atccctaatg cgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcg 64

<210> 190
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 190

tcggctcact cgagcgaatc ggctcaggaa aattgactgt gacgtagcac atcctgattg 60

gtaaactatt gaatcctgtg catacatcct cacttatcct cttcctgcga ctctcttctc 120

cttggttctc cgtattctcc ctcaatccta ttaacctttt cttctttcat ttcccacccc 180

attctataat caatcaatgg caatggcttc ttcaatccct aatgcgcctt ctgcgttcaa 240

ttctcagagc tacgttggtc tcagag 266

<210> 191
<211> 264
<212> nucleic acid
<213> Glycine max

<400> 191

ctcatataga aaattgactg tgacgttgct gaagctgatt ggtaaagtat tgaatcctgt 60

gcatacatcc tcacttatcc tcttcctgcg actctcttct cattggttct ccgtattctc 120

cctcaatcct attgaccttt tcttctttca tttcccaccc cattctataa tcaatcaatg 180

gcaatggctt cttcaatccc taatgcgcct tctgcgttca attctcagag ctacgttggt 240

ctcagagcgc cactgaggac cttc 264

<210> 192
<211> 335
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (8)...(9),(30),(67)...(68),(80)...(81),(140),(153),
(159),(161)...(162),(267),(331)
<223> unsure at all n locations

<400> 192

atatgctnnc cagctgttgc ccaaggtgcn attggaatag cctgtagaag taacgatgat 60

aaaatgnnca gaatacctcn ncttcattga atcatgaaga aacaagacta gcagtttgct 120

gtgaaagagc cttccttgan aagtagaagg atntgccgna nnctattgca ggctatgcta 180

gcagaaacga ggatggcaat tgcttgttta gaggatagtt gcttcccctg atggaacccg 240

cgtgctcgaa actccagaat ggttcanatg ctttcgaaga tatgataaag atgggtaaga 300

tgctggagag gagctctttc tcgagctgac ntgct 335

<210> 193
<211> 257
<212> nucleic acid
<213> Glycine max

<400> 193

gaacagcgaa atcgacatcg ctgtccattc gatgaaggat gttcctactt acttgcctga 60

taaaacaatt ctgccatgta accttccgcg agaggatgtc agagatgcat ttatatcctt 120

gactgcagct tccttagctg atcttccccc tgcaagtgtt attggtactg cttcgttaag 180

gcgaaagtca cagatcctcc acagatatcc atctcttaat gtgcaggaaa atttccgtgg 240

caatgtccaa acaaggt 257

<210> 194
<211> 269
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (172)
<223>

<400> 194

cgtttaaata tgacggaaaa tgtgacttcg atcctatcaa ttgatgacat gcttccagct 60

gttgcccaag gtgcaattgg aatagcctgt agaagtaatg atgataaaat ggcggaatac 120

cttgcttcac tgaatcatga agaaacaaga ctagcagttt cctgcgaaag angcttcctt 180

gaaaagttgg aagggtctgc cgcactccta ttgcaggcta tgctagcaga aatgaggatg 240

gcaattgctt gtttagagga ttagttgca 269

<210> 195
<211> 259
<212> nucleic acid
<213> Glycine max

<400> 195

tgatgataaa atggcggaat accttgcttc actgaatcat gaagaaacaa gactagcagt 60

ttcctgtgaa agatccttcc ttgaaaagtt ggaagggtct tgccgcactc ctattgcagg 120

ctatgctagc agaaatgagg atggcaattg cttgtttaga ggattagttg catcccctga 180

tggaatccgt gtgcttgaaa cttccagaat tggcccatat gcgttcgcag atatgataaa 240

gatgggtaag gatgctgga 259

<210> 196
<211> 205
<212> nucleic acid
<213> Glycine max

<400> 196

cttaagtatg acagaaaatg tgacttcaat cctatcaatt gatgatatgc ttccagctgt 60

tgcccaaggt gctattggaa tagcatgtag aagtgatgac gataaaatgg cggaatacat 120

tgctacactt aatcatgaag aaacaagact agcagttgtc tgtgagaggg cctttcttca 180

gactttggat gggtctgccg cactc 205

<210> 197
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 197

ctgcttcgtt aaggcgaaag tcacagatcc tccacagata tccatctctt aatgtgcagg 60

aaaatttccg tggcaatgtc caaacaaggt taagaaaact caatgagggg gttgtccaag 120

ctacactatt agcattagct ggactcaaac gcttaagtat gacagaaaat gtgacttcaa 180

tcctatcaat agatgatatg cttccagctg ttgcccaagg tgccattgga attgcctgta 240

gaagtgatga cgataaaatg gcagaataca t 271

<210> 198
<211> 287
<212> nucleic acid
<213> Glycine max

<400> 198

attggaattg cctgtagaag tgatgacgat aaaatggcag aatacattga ttcacttaat 60

catgaagaaa caaggctagc agttgtctgt gaaagggcct ttcttcagac tttggatggg 120

tcttgccgca ctcctattgc agggtatgct tgtagaaacg aggatggcaa ttgtttgttt 180

agaggattag ttgcttcccc tgatggaacc agagtgctag agacatccag ggttggtcca 240

tatgctgttg aagatatgat tgagatgggt aaggatgctg gcaagga 287

<210> 199
<211> 276
<212> nucleic acid
<213> Glycine max

<400> 199

attgggaatt gcctgtagaa gtgatgacga taaaatggca gaatacattg attcacttaa 60

tcatgaagaa acaaggctag cagttgtctg tgaaagggcc tttcttcaga ctttggatgg 120

gtcttgccgc actcctattg cagggtatgc ttgtagaaac gaggatggca attgtttgtt 180

tagaggatta gttgcttccc ctgatggaac cagagtgcta gagacatcca gggttggtcc 240

atatgctgtt gaagatatga ttgagatggg taagga 276

<210> 200
<211> 285
<212> nucleic acid
<213> Glycine max

<400> 200

attggaattg cctgtagaag tgatgacgat aaaatggcag aatacattga ttcacttaat 60

ccatgaagaa acaaggctag cagttgtctg tgaaagggcc tttcttcaga ctttggatgg 120

gtcttgccgc actcctattg cagggtatgc ttgtagaaac gaggatggca attgtttgtt 180

tagaggatta gttgcttccc ctgatggaac cagagtgcta gagacatcca gggttggtcc 240

atatgctgtt gaagatatga ttgagatggg taaggatgct ggcaa 285

<210> 201
<211> 259
<212> nucleic acid
<213> Glycine max

<400> 201

gtgaaagggc ctttcttcag actttggatg ggtcttgccg cactcctatt gcagggtatg 60

cttgtagaaa cgaagatggc aattgtttgt ttagaggatt agttgcttcc cctgatggaa 120

ccagagtgct agagacatcc agggttggtc catatgctgt tgaagatatg attgagatgg 180

gtaaggatgc tggcaaggag cttctgtctc gggctggacc taacttcttc agtagttagc 240

agcagatgat taaagtgtg 259

<210> 202
<211> 285
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (18)
<223>

<400> 202

gcagacagaa gcgaacgnaa cggggttgcc tcaacaattc gctgttgttg ttctcttctc 60

ttctctttga catgaatact ctttcttcca cgctccatgg cggcaggctt ccccgctcag 120

cttcgaaaac caaaaccgca tctctctcca aatgccatcg catttgggtc accaaagctt 180

ctgttgccgt tgagcaacaa actaaggtcg ctctcatcag aattggtacc agaggaagtc 240

cactagctct agcacaagca tatgagacca gagacaaact catgg 285

<210> 203

<211> 282
<212> nucleic acid
<213> Glycine max

<400> 203

agcagacaga agcgagcgaa acggggttgc ctcaacaatt cgctgttgtt gttctcttct 60

cttctctttg acatgaatac tctttcttcc acgctccatg gcgggaggct tccccgctca 120

gcttcgaaaa ccaaaaccgc atctctctcc aaatgccatc gcatttgggt caccaaagct 180

tctgttgccg ttgagcaaca aactaaggtc gctctcatca gaattggtac cagaggaagt 240

ccactagctc tagcacaagc atatgagacc agagacaaac tc 282

<210> 204
<211> 251
<212> nucleic acid
<213> Glycine max

<400> 204

ccgaacgaaa cggggttgcc tcaacaattc gctgttgttg ttctcttctc ttctctttga 60

catgaatact ctttcttcca cgctccatgg cgggtggctt ccccgctcag cttcgaaaac 120

cacaaccgca tctctctcca aatgccatcg catttgggtc accaaagctt ctgttgccgt 180

tgagcaacaa actaaggtcg ctctcatcag aattggtacc agaggaagtc cactagctct 240

agcacaagca t 251

<210> 205
<211> 327
<212> nucleic acid
<213> Glycine max

<400> 205

atcggcaagg taaggcaatt gaagttgtga aatggagact gtctgctctg cattggtgtt 60

cccatctttc agaatcacaa cttcagcttt ctccaaatgt ggcatcaggg cttccattgc 120

cgttgagcaa caaacttcgc agactaaggt tgctctcctc aaaattggta ccagaggaag 180

tccactagct ctggctcagg catatgagac cagagacaag ctcatggcat cacatccaga 240

gctagcggaa gaaggggcta ttcagattgt gataatgaaa acaactggtg acaaaatact 300

atcacagcca cttgcagaca tcggcgg 327

<210> 206
<211> 390
<212> nucleic acid
<213> Glycine max

<400> 206

gaaatggaga ctctctgctc tgcattggtg ttcccatctt tcagaatcac aacttcagct 60

ttctccaaat gtggcatcag ggctttcatt gccgttgagc aacatacttc gcagactaag 120

gttgctctcc tcaaaattgg taccagagga agtccactag ctctggctca tgcatatgag 180

accagagaca atctcatggc atcacatcca gagctagcgg atgaaggggc tattcagatc 240

gtgataataa aaacaactgg tgacattata ctatcacagc cacttgcaga catcggcggt 300

aagggcctgt ccacaatcga tatagacgag gcactcatta acggtgacat tgacatcgcc 360

gttcactcta tgaaagatgt acccacttac 390

<210> 207
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 207

cgttgctctc ctcagaattg gtaccagagg aagtccacta gctctggctc acgcatatga 60

gaccagagac aagctcatgg catcacatgc agagctagca caagaagggg ctattcagat 120

tgtaataatc aaaacaactg gtgacaaaat actatcacag ccacttgcag acattggtgg 180

gaagggccta ttcacaaaag aaatagatga ggcactcata aacggtgaca ttgacatcgc 240

tgtccactca atgaaa 256

<210> 208
<211> 289
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (13),(47),(80),(103),(234),(247),(251),(263)
<223> unsure at all n locations

<400> 208

ggagaccctc tgnctctgca ttggtgttcc catctttcag aatcagnact tcagctttct 60

ccaaatgtgg catcagggcn tccattgccg ttgagcaaca aanttcccag actaaggttg 120

ctctcctcag aattggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180

gagacaagct catggcatca catgcagagc tagcagaaga aggggctatt cagnttgtaa 240

taataanaac nactggtgac aanatactat cacagccact tgcagacat 289

<210> 209
<211> 259
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (92),(125)
<223> unsure at all n locations

<400> 209

agggcttcca ttgccgttga gcaacaaact tcccagacta aggttgctct cctcagaatt 60

ggtaccagag gaagtccact agctctggct cncgcatatg agaccagaga caagctcatg 120

gcatnccatg cagagctagc agaagaaggg gctattcaga ttgtaataat aaaaacaact 180

ggtgacaaaa tactatcaca gccacttgca gacattggtg ggaagggcct attcacaaaa 240

gaatagatga ggcatcata 259

<210> 210
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 210

ctctctgctc tgcattggtg ttcccatatt tcagaatcac aacttcagct ttctccaaat 60

gtggcatcag ggcttccatt gccgttgagc aacaaacttc gcagactaag gttgctctcc 120

tcaaaattgg taccagagga agtccactag ctctggctca ggcatatgag accagagaca 180

agctcatggc atcacatcca gagctagcgg aagaaggggc tattcagatt gtgataataa 240

aaacaactgg tgacaaaata ctatcaca 268

<210> 211
<211> 270
<212> nucleic acid

<213> Glycine max

<400> 211

ggagactctc tgctctgcat tggtgttccc atctttcaga atcacaactt cagctttctc 60

caaatgtggc atcagggctt ccattgccgt tgagcaacaa acttcgcaga ctaaggttgc 120

tctcctcaaa attggtacca gaggaagtcc actagctctg gctcaggcat atgagaccag 180

agacaagctc atggcatcac atccagagct agcggaagaa ggggctattc agattgtgat 240

aataaaaaca actggtgaca aaatactatc 270

<210> 212
<211> 295
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (246)
<223>

<400> 212

tggagaccct ctgctctgca ttggtgttcc catctttcag aatcagaact tcagctttct 60

ccaaatgtgg catcagggct tccattgccg ttgagcaaca aacttcccag actaaggttg 120

ctctcctcag aattggtacc agaggaagtc actagctctt ggctcaggca tatgagacca 180

gagacaagct catggcatca catgcagagc tagcagaaga aggggctatt cagattgtat 240

aataanaaca actggtgaca aaatatatca cagccattgc agacattggt gggag 295

<210> 213
<211> 267
<212> nucleic acid
<213> Glycine max

<400> 213

ctctctgctc tgcattggtg ttcccatctt tcagaatcac aacttcagct ttctccaaat 60

gtggcatcag ggcttccatt gccgttgagc aacaaacttc gcagactaag gttgctctcc 120

tcaaaattgg taccagagga agtccatagc tctggctcag gcatatgaga ccagagacaa 180

gctcatggca tcacatccag agctagcgga agaaggggct attcagattg tgataataaa 240

aacaactggt gacaaatact atcacag 267

<210> 214
<211> 251
<212> nucleic acid
<213> Glycine max

<400> 214

tggagactct ctgctctgca ttggtgttcc catctttcag aatcacaact tcagctttct 60

ccaaatgtgg catcagggct tccattgccg ttgagcaaca aacttcgcag actaaggttg 120

ctctcctcaa aattggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180

gagacaagct catggcatca catccagagc tagcggaaga aggggctatt cagattgtga 240

taataaaaac a 251

<210> 215
<211> 159
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (130),(144),(158)
<223> unsure at all n locations

<400> 215

ccacttcagc tttctccaaa tgtggcatca gggcttccat tgccgttgag caacaaactt 60

cccagactaa ggttgctctc ctcagaattg gtaccagagg aagtccacta gctctggctc 120

aggcatatgn gaccagagac aagntcatgg catcacang 159

<210> 216
<211> 270
<212> nucleic acid
<213> Glycine max

<400> 216

gttcccatct ttcagaatca gaacttcagc tttctccaaa tgtggcatca gggcttccat 60

tgccgttgag caacaaactt cccagactaa ggttgctctc ctcagaattg gtaccagagg 120

aaggtaccct acccttaaaa ataacacctt tagcttctta tgagcatttc ttttaaagaa 180

caagtctgtg aaaatattga gtcctgaatc tcttcaaaac tttgccctca ttttcaaatt 240

tagttttcaa tgctagtttt atgacagaaa 270

<210> 217
<211> 147
<212> nucleic acid
<213> Glycine max

<400> 217

gtgaaatgga gaccctctgc tctgcattgg tgttcccatc tttcagaatc agaacttcag 60

ctttctccaa atgtggcatc agggcttcca ttgccgttga gcaacaaact tcccagacta 120

aggttgctct cctcagaatt ggtacca 147

<210> 218
<211> 253
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (64),(93)
<223> unsure at all n locations

<400> 218

ccaagaccga caacaaactc actcttacca agtccgagga agctttcgct gctgccaagg 60

agcngatgcc tggaggtgtc aactccccag ttngtgcctt caaatccgtg ggtggtcaac 120

caattgtgat tgattcagtc aaagggtctc gtatgtggga catcgacggc aatgagtaca 180

ttgactacgt cggttcttgg ggtcccgcaa tcattggtca cgctgatgat caagtgcttt 240

cagctctggt tgt 253

<210> 219
<211> 264
<212> nucleic acid
<213> Glycine max

<400> 219

tgcgtgcgtg agcgtcttac ctttccatta tcaaaatgac tgtttcagct atcacaggct 60

cgcagtctca cctcttgcca tggttagcga tacctctttc ctctcccacg cgctctcgaa 120

tcgtcgcaat ggccgtatcc gtcgtcccca agaccgacaa caaactcact cttaccaagt 180

ccgaagcagc tttcgctgct gccaaggagc tgctgcctgg cggtgtcaac tccccagttc 240

gtaccttcaa atccgtaggt ggtc 264

<210> 220
<211> 157
<212> nucleic acid
<213> Glycine max

<400> 220

ctcgtctgag ggctgttacc atggccatgc tgatcctttt cgtgttaagg caggtagtgg 60

agttgccacc ttgggacttc ctgattctcc cggtgtcccc aaagctgaca ctgtggaaac 120

ccttacagcg ccctacaatg atactgccgc cgtcgag 157

<210> 221
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 221

aaacccgatt ttcataattt cttgcgcaag atcaccaagg agaacaatac ccttcttgtg 60

tttgatgaag ttatgactgg gtttcgtttg tcatacggag gtgctcaaga gtattttggc 120

ataactcctg atatacaact ctaggaaaga tcattggtgg aggtctgccg gtgggggctt 180

atggagggag gagggatatt atggagaagg tggcaccagc tggcccaatg tatcaggctg 240

ggaccttgag tgggaacctt tggcca 266

<210> 222
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 222

aaaggagaaa ttgccgcagt tttcctcgaa cctgttgttg gaaacgctgg tttcattgtt 60

cctaagcctg attttcatag tttcttgcgc aagatcacca aggagaacaa taccttctt 120

gtgtttgatg aagtcatgac tggatttcgt ttgtcatatg gaggtgctca agagtattat 180

ggcataactc cagatataac aactctagga aagatcattg gtggaggtct gccggtaggg 240

cttatggagg 250

<210> 223
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 223

gctcaagagt attttggcat aactcctgat ataacaactc taggaaagat cattggtgga 60

ggtctgccgg tgggggctta tggagggagg agggatatta tggagaaggt ggcaccagct 120

ggcccaatgt atcaggctgg gaccttgagt gggaaccctt tggccatgac tgcaggaata 180

cagaccctgc agcgtattaa ggagccagga acttatgagt acttggacaa aatcaccggt 240

gagcttgttc agggca 256

<210> 224
<211> 288
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (7),(22),(45),(213),(283)
<223> unsure at all n locations

<400> 224

tttaggnagc tgatgcctgg anggcgtgaa ctccccagtt cgtgncttca aatccgtggg 60

tggtcaacca attgtgattg attcagtcaa agggtctcgt atgtgggata tcgatggcaa 120

tgagtacatt gactacgttg gttcctgggg tcctgcaatc attggtcacg ctgatgatca 180

ggtgcttgca gctctgggtg aaaccatgaa ganaggaacc agctttgggt gcaccctgtc 240

tgctggaaaa cacttttggc agagctgggt tatcgatgcc gtncccca 288

<210> 225
<211> 283
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (93),(98),(101),(130),(150),(157),(172),(177),(196),
(215),(243),(270)
<223> unsure at all n locations

<400> 225

attttgcaga tgccaaaaag agtgatacgg ccaagtttgc taggcccttt tggggaatgc 60

tggcggaagg tgtctatttg gcaccttccc agnttgangc nggcttcacc agcttggcac 120

atacttctgn tgacataaaa aagacgatan ccgctgntga gaaggttttc anggagntct 180

gatggttaaa ttttgntttg ttgcaaattt aattntcgga gggtgaattt ttaggtcaat 240

ttngattatt gttatggcag ttgctttcgn tatgatctgt atc 283

<210> 226
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 226

gggtcctgca atcattggtc acgctgatga tcaggtgctt gcagctctgg gtgaaaccat 60

gaagaaagga accagctttg gtgcaccctg tctgctggaa aacactttgg cagagctggt 120

tatcgatgcc gtccccagca ttgaaatggt tcggtttgtc aattcaggca ctgaagcttg 180

catgggtgcg ctccgtctgg cccgtgctta taccggaaga gagaagatca tcaagtttga 240

gggctgtta 249

<210> 227
<211> 442
<212> nucleic acid
<213> Glycine max

<400> 227

ataaggcttt gcatttcatt tgagagagag agcgtcttac ctttccatta tcaaaatggg 60

tgggtcggct atcacaggag cgaggctaac cctagggata gggttggcga tacctctttc 120

ctctcccacg cgctctcgaa ccgtcgcaat ggccgtatcc gtcgacccca agaccgacaa 180

caaactcact cttaccaagt ccgaggaagc tttcgctgct gccaaggtac gcatgacctc 240

cctcttcctt ccttccttcc tcctttcaat tttgattttt gatttttgat ttcaggagct 300

gatgcctgga ggtgtcaact ccccagttcg tgccttcaaa tccgtgggtg gtcaaccaat 360

tgtgattgat tcagtcaaag ggtctcgtat gtgggacatc gacggcaatg agtacattga 420

ctacgtcggt tcttggggtc cc 442

<210> 228

<211> 275
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (93)
<223>

<400> 228

tcaaaatggc tgtttcggct atcacaggag cgaggctaac cctagggata gggttggcga 60

tacctctttc ctctcccacg cgctctcgaa ccntcgcaat ggccgtatcc gtcgacccca 120

agaccgacaa caaactcact cttaccaagt ccgaggaagc tttcgctgct gccaaggagc 180

tgatgcctgg aggtgtcaac tccccagttc gtgccttcaa atccgtgggt ggtcaaccaa 240

ttgtgattga ttcagtcaaa gggtctcgta tgtgg 275

<210> 229
<211> 261
<212> nucleic acid
<213> Glycine max

<400> 229

acccacgcgt ccgacggctg caagaggacg acagaagggg aaggctttgc atttcatttg 60

agagagagag cgtcttacct ttccattatc aaaatggctg tttccgctat cacaggagcc 120

aagctaaccc taaggataag gttggcgata cctccttcct ctcccaagcg ctctcgaacc 180

gtcgcaatgg ccgtatccgt cgaccccaag accgacaaca aactcaatcc taccaagtcc 240

gaagaagctt tcgctgctgc c 261

<210> 230
<211> 289
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (35)
<223>

<400> 230

ggagaggata aggctttgca tttcatttga gaganagagc gtcttacctt tccattatca 60

aaatggctgt ttcggctatc acaggagcga ggctaaccct agggataggg ttggcgatac 120

ctctttcctc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gaccccaaga 180

ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240

tgcctggagg tgtcaactcc ccagttcgtg ccttcaaatc cgtgggtgg 289

<210> 231
<211> 252
<212> nucleic acid
<213> Glycine max

<400> 231

agcgtcttac ctttccatta tcaaaatggc tgtttcggct atcacaggag cgaggctaac 60

cctagggata gggttggcga tacctctttc ctctcccacg cgctctcgaa ccgtcgcaat 120

ggccgtatcc gtcgacccca agaccgacaa caaactcact cttaccaagt ccgaggaagc 180

tttcgctgct gccaaggagc tgatgcctgg aggtgtcaac tccccagttc gtgccttcaa 240

atccgtgggt gg 252

<210> 232
<211> 281
<212> nucleic acid
<213> Glycine max

<400> 232

ggctttgcat ttcatttgag agagagagcg tcttaccttt ccattatcaa aatggctgtt 60

tcggctatca caggagcgag gctaacccta gggatagggt tggcgatacc tctttcctct 120

cccacgcgct ctcgaaccgt cgcaatggcc gtatccgtcg accccaagac cgacaacaaa 180

ctcactctta ccaagtccga ggaagctttc gctgctgcca aggagctgat gcctggaggt 240

gtcaactccc cagttcgtgc cttcaaatcc gtgggtggtc a 281

<210> 233
<211> 276
<212> nucleic acid
<213> Glycine max

<400> 233

taaggctttg catttcattt gagagagaga gcgtcttacc tttccattat caaaatggct 60

gtttcggcta tcacaggagc gaggctaacc ctagggatag ggttggcgat acctctttcc 120

tctcccacgc gctctcgaac cgtcgcaatg gccgtatccg tcgaccccaa gaccgacaac 180

aaactcactc ttaccaagtc cgaggaagct ttcgctgctg ccaaggagct gatgcctgga 240

ggtgtcaact ccccagttcg tgccttcaaa tccgtg 276

<210> 234
<211> 276
<212> nucleic acid
<213> Glycine max

<400> 234

ttgcatttca tttgagagag agagcgtctt acctttccat tatcaaaatg gctgtttcgg 60

ctatcacagg agcgaggcta accctaggga tagggttggc gatacctctt tcctctccca 120

cgcgctctcg aaccgtcgca atggccgtat ccgtcgaccc caagaccgac aacaaactca 180

ctcttaccaa gtccgaggaa gctttcgctg ctgccaagga gctgatgcct ggaggccgtc 240

aatccccagt tcgtgccttc aaatccgtgg gtggtc 276

<210> 235
<211> 251
<212> nucleic acid
<213> Glycine max

<400> 235

tttgcatttc atttgagaga gagagcgtct tacctttcca ttatcaaaat ggctgtttcg 60

gctatcacag gagcgaggct aaccctaggg atagggttgg cgatacctct ttcctctccc 120

acgcgctctc gaaccgtcgc aatggccgta tccgtcgacc ccaagaccga caacaaactc 180

actcttacca agtccgagga agctttcgct gctgcaagga gctgatgcct ggaggtgtca 240

actccccagt t 251

<210> 236
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 236

cggctcgaca aggctttgca tttcatttga gagagagagc gtcttacctt tccattatca 60

aaatggctgt ttcggctatc acaggagcga ggctaaccct agggataggg ttggcgatac 120

ctctttcctc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gaccccaaga 180

ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240

tgcctggagg tgtcaactcc ccagttcgtg c 271

<210> 237
<211> 257
<212> nucleic acid
<213> Glycine max

<400> 237

ggagaggata aggctttgca tttcatttga gagagagagc gtcttaactt tacattatca 60

aaatggctgt ttcggctatc acaggagcga ggctaaatct agggataggg ttggcgatac 120

ctctttcctc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gaccccaaga 180

ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240

tgcctggagg tgtcaac 257

<210> 238
<211> 153
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (40),(53),(71),(103)
<223> unsure at all n locations

<400> 238

acaggagcga ggctaaccct agggataggg ttggcgatan ctctttcctc tcncactccg 60

ctctcgaacc ntcgcaatgg ccgtatccgt cgaccccaag acngacaaca aactcactct 120

taccaagtcc gaggaagctt tcgctgctgc caa 153

<210> 239
<211> 104
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (88)

<223>

<400> 239

acggctgcga gaagacgaca gaagggggag cgtcttacct ttccattatc aaaatggcta 60

tttcggctat cacaggagcg aggctaancc tagggatagg gttg 104

<210> 240
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 240

ggctgggacc ttgagtggga accctttggc catgactgca ggaatacaga ccctgcagcg 60

tattaaggag ccaggaactt atgagtactt ggacaaaatc accggtgagc ttgttcaggg 120

cattattgaa gctgggaaga gggcaggcca tgcaatatgt ggtggtcata taagggggat 180

gtttgggttt ttcttcacag aaggaccagt gtataatttt gcagatgcca aaaagagtga 240

tacggacaag tttctaggtt cttttggg 268

<210> 241
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 241

gaaggtggca ccagctggcc caatgtatca ggctgggacc ttgagtggga accctttggc 60

catgactgca ggaatacaga ccctgcagcg tattaaggag ccaggaactt atgagtactt 120

ggacaaaatc accggtgagc ttgttcaggg cattattgaa gctgggaaga gggcaggcca 180

tgcaatatgt ggtggtcata taagggggat gtttgggttt ttcttcacag aaggaccagt 240

gtataatttt gcagat 256

<210> 242
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 242

ggcaccagct ggcccaatgt atcaggctgg gaccttgagt gggaaccctt tggccatgac 60

tgcaggaata cagaccctgc agcgtattaa ggagccagga acttatgagt acttggacaa 120

aatcaccggt gagcttgttc agggcattat tgaagctggg aagagggcag gccatgcaat 180

atgtggtggt catataaggg ggatgtttgg gtttttcttc acagaaggac cagtgtataa 240

ttttgcagat gcc 253

<210> 243
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 243

ctcgagccgc tcgagccggt ctgctggaaa acactttggc agagctggtt atcaatgcgg 60

tccccagcat tgcaatggtt cgctttgtca attcaggcac cgaagcttgc atgggtgcac 120

tacgtctcgc ccgagcttat accggaagag agaagatcat caagtttgag ggctgttacc 180

atggccatgc tgatcctttt cttgttaagg caggtagtgg agttgccacc ttgggacttc 240

ctgattctcc cggtgtcccc aaagctgcc 269

<210> 244
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 244

ctcgagccgc tcgagccggt ctgctggaaa acactttggc agagctggtt atcaatgcgg 60

tacccagcat taccaatggt tcgctttgtc aattcaggca ccgaagcttg catgggtgca 120

ctacgtctcg cccgagctta taccggaaga gagaagatca tcaagtttga gggctgttac 180

catggccatg ctgatccttt tcttgttaag gcaggtagtg gagttgccac cttgggactt 240

cctgattctc ccggtgtccc caaagc 266

<210> 245
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 245

tcaagtttga gggctgttac cgtggccatg ctgatccttt tcttgttaag gcaggtagtg 60

gagttgccac cttaggactt cctgattctc ccggtgtccc caaagctgcc acttttgaaa 120

cccttacagc cccctacaat gacaccgagg ccattgagaa actcttcgag gccaacaaag 180

gagaaattgc cgcagttttc ctcgaacctg ttgttggaaa cgctggtttc attgttccta 240

agcctgattt tcatagtttc ttgcgc 266

<210> 246
<211> 238
<212> nucleic acid
<213> Glycine max

<400> 246

gttaccatgg ccatgctgat ccttttcttg ttaaggcagg tagtggagtt gccaccttgg 60

gacttcctga ttctcccggt gtccccaaag ctgccacttt tgaaaccctt acagcccccc 120

acaatgacac tgccgccgtt gagaagctct ttgaggctaa caaaggagaa atcgctgctg 180

ttttcctcga acctgttgtt ggaaacgctg gtttcattgt tcctaaaccg attttcat 238

<210> 247
<211> 232
<212> nucleic acid
<213> Glycine max

<400> 247

gggagatctg attgttaaat tttgttttgt tgcgaattta gttttcagtt ggtgaatttt 60

gtaggtcaat ttagattatt atggcagttg ctttcgttat gatctgtatc attttcccat 120

cctgtatcta cccagtgtat tatgttgagc tgtaagttac ttgaatgtga agcatgtaag 180

cattcgaatt cattgtttaa ctcctaattc tagttccaca tgttatgttt tt 232

<210> 248
<211> 82
<212> nucleic acid
<213> Glycine max

<400> 248

ccatcctgta tctacccagt gtattatgtt gagctgtaag ttacttgaat gtgaagcatg 60

taagcattcg aattcattgt tt 82

<210> 249

<211> 406
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (269),(356),(372)
<223> unsure at all n locations

<400> 249

acgcccacgc gtccgtacgg ctgcgagaag acgacagaag ggggtgttgg atgaggcgaa 60

actcgagagt gtaaggtttt gcatttcatt tgacgaagag tgagagagtc ttatctgtcg 120

tctctgatct ctgatcgcat cttcattccg aaaatggctg tttcggctat cactggagcg 180

aggctaactc tagggatgtc tctttcctct tccacgcgat cacgaaccgt cgcaatggcc 240

gtatctatcg accccaagac cgataacana ctcactctta ccaagtccga ggaagcttcc 300

gctgcggcca aagagctgat gcctggaggc gtgaactccc cagttcgtgc cttcanatcc 360

gtgggtggtc anacaattgt gattgattca gtcaaagggt ctcgta 406

<210> 250
<211> 305
<212> nucleic acid
<213> Glycine max

<400> 250

cccacgcgtc cgtacggctg cgagaagacg acagaagggg gagagtgtaa ggttttgcat 60

ttcatttgac gaagagtgag agagtcttat ctgtcgtctc tgatctctga tcgcatcttc 120

attccgaaaa tggctgtttc ggctatcact ggagcgaggc taactctagg gatgtctctt 180

tcctcttcca cgcgatcacg aaccgtcgca atggccgtat ctatcgaccc caagaccgat 240

aacaaactca ctcttaccaa gtccgaggaa gctttcgctg cggccaagga gctgatgcct 300

ggagg 305

<210> 251
<211> 296
<212> nucleic acid
<213> Glycine max

<400> 251

gaaactcgag agtgtaaggt tttgcatttc atttgacgaa gagtgagaga gtcttatctg 60

tcgtctctga tctctgatcg catcttcatt ccgaaaatgg ctgtttcggc tatcactgga 120

gcgaggctaa ctctagggat gtctctttcc tcttccacgc gatcaacaac acaagcaatg 180

gccgtatcta tcgaccccaa gaccgataac aaactcactc ttaccaagtc cgaggaagct 240

ttcgctgcgg ccaaggagct gatgcctgga ggcgtgaact ccccagttcg tgccttt 296

<210> 252
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 252

ctgcgagaag acgacagaag ggggagagtg taaggttttg catttcattt gacgaagagt 60

gagagagtct tatctgtcgt ctctgatctc tgatcgcatc ttcattccga aaatggctgt 120

ttcggctatc actggagcga ggctaactct agggatgtct ctttcctctt ccacgcgatc 180

acgaaccgtc gcaatggccg tatctatcga ccccaagacc gataacaaac tcactcttac 240

caagtccgag gaagctttcg ctgcgg 266

<210> 253
<211> 293
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (196)
<223>

<400> 253

ggttttgcat ttcatttgac gaagagtgag agagtcttat ctgtcgtctc tgatctctga 60

tcgcatcttc attccgaaaa tggtgtttcg gctatcactg gagcgaggta actctaggga 120

tgtctctttc ctcttccacg cgatcacgaa ctgaagcaat ggccgtatct atcgacccca 180

agaccgataa caaacncatc ttaccaagtt cgaggaagtt tcgctgcggc caaggagtga 240

tgctggaggc gtgaactccc cagttcgtgc cttcaaatcc gtgggtggtc aac 293

<210> 254
<211> 273
<212> nucleic acid

<213> Glycine max

<400> 254

gttggagagg cgaaactcga gagtgtaagg ttttgcattt catttgacga agagtgagag 60

agtcttatct gtcgtctctg atctctgatc gcatcttcat tccgaaaatg gctgtttcgg 120

ctatcactgg agcgaggcta actctaggga tgtctctttc ctcttccacg cgatcacgaa 180

tccccgcaat ggccgtatct atcgacccca agaccgataa caaactcact cttaccaagt 240

ccgaggaagc tttcgctgcg gccaaggagc tga 273

<210> 255
<211> 267
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (67),(85),(90),(100),(124)...(125),(140),(148),(151),
(153),(162),(164),(173)...(174),(176)...(178),(181),
(184),(190),(192),(209),(220),(226),(231),(237),(263),
(265)
<223> unsure at all n locations

<400> 255

gggcgaaact cgagagtgta aggttttgca tttcatttga cgaagagtga gagagtctta 60

tctgtcncct ctgatctctg atcgnatctn cattccgaan atggctgttt cggctatcac 120

tggnncgagg ctaactctan ggatgtcnct ntnctcttcc angngatcac gcnntnnncg 180

naanggacgn anctatcgac cccaagacng ataacaaatn actctnacca ngtccgngga 240

agctttcgct gcggccaagg agntnat 267

<210> 256
<211> 254
<212> nucleic acid
<213> Glycine max

<400> 256

ggcgaaactc gagagtgtaa ggttttgcat ttcatttgac gaagagtgag agagtcttat 60

ctgtcgtctc tgatctctga tcgcatcttc attccgaaaa tggctgtttc ggctatcact 120

ggagcgaggc taactctagg gatgtctctt tcctcttcca cgcgatcacg aacccatgca 180

atggccgtat ctatcgaccc caagaccgat aacaaactca ctcttaccaa gtccgaggaa 240

gctttcgctg cggc 254

<210> 257
<211> 254
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (188)
<223>

<400> 257

gttggatgag gcgaaactcg agagtgtaag gttttgcatt tcatttgacg aagagtgaga 60

gagtcttatc tgtcgtctct gatctctgat cgcatcttca ttccgaaaat ggctgattcg 120

gctatcactg gagcgccgtt aactctaggg atgtcttctt cctcgtgcag gcgacctcga 180

acgctggnaa tggccgtatc tatcgacccc aagaccgata acaaactcac tcttaccaag 240

tccgaggaag cttt 254

<210> 258
<211> 270
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (48)...(49),(56),(58),(86),(117),(137),(184),(200),
(204),(208),(226),(232)...(233)
<223> unsure at all n locations

<400> 258

aggttttgca tttcatttga cgaagagtga gagagtctta tctgtcgnnt ctgatntntg 60

atcgcatctt cattccgaaa atggcngttt cggctatcac tggagcgagg ctaagtntag 120

ggatgtctct ttacctnttc cacgcgatca cgaaccacac gcaatggccg tatctatcga 180

cccnaagacc gctaacaaan tcantctnac caagttccga ggaagntttg gnngcgggcc 240

aagggagtga tgcctggagg cgtgaactcc 270

<210> 259
<211> 165

<212> nucleic acid
<213> Glycine max

<400> 259

ggcgaaactc gagagtgtaa ggttttgcat ttcatttgac gaagagtgag agagtcttat 60

ctgtcgtctc tgatctctga tcgcatcttc attccgaaaa tggctgtttc ggctatcact 120

ggagcgaggc taactctagg gatgtctctt tcctcttcca cacaa 165

<210> 260
<211> 161
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (50)
<223>

<400> 260

cgaaactcga gagtgtaagg ttttgcattt catttgacga agagtgagan agtcttatct 60

gtcgtctctg atctctgatc gcatcttcat tcccgaaaat ggctgtttcg gctatcactg 120

gagcgaggct aactctaggg atgtctcttt cctcttccac a 161

<210> 261
<211> 153
<212> nucleic acid
<213> Glycine max

<400> 261

aaggttttgc atttcatttg acgaagagtg agagagtctt atctgtcgtc tctgatctct 60

gatcgcatct tcattccgaa aatggctgtt tcggctatca ctggagcgag gctaactcta 120

gggatgtctc tttcctcttc cacacaacat acg 153

<210> 262
<211> 241
<212> nucleic acid
<213> Glycine max

<400> 262

cttcatttga cgaagagtga gagagtctta tctgtcgtct ctgatctctg atcgcatctt 60

cattccgaaa atggctgttt cggctatcag tggagcgagg ctaactctag ggatgtctct 120

ttcctgttcc acgcgatgta taagatgatg gatggccgca tctatcgacc tctagacagc 180

taagatactc agtcttagga ggtccgagga agctttcgct gtggccaagg attgatgtcc 240

a 241

<210> 263
<211> 130
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (30),(66)...(67)
<223> unsure at all n locations

<400> 263

gcgaaactcg agagtgtaag gttttgcatn tcatttgacg aagagtgaga gagtcttatc 60

tgtcgnntct gatctctgat cgcatcttca ttccgaaaat ggctgtttcg gctatcactg 120

gagcgaggct 130

<210> 264
<211> 169
<212> nucleic acid
<213> Glycine max

<400> 264

cgctcgagcg aatcggctca cggctcgagg ttttgcattt actttgacga agagtgacga 60

gagtcttatc tgtcgtctct gatctctgat cgcatcttca ttccgaaaat ggctgtttcg 120

gctatcactg gagcgaggct aactctaggg atgtctcttt cctcttcca 169

<210> 265
<211> 181
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (12),(22),(25),(31),(34),(57),(66),(75),(77)...(78),
(88),(98),(143),(150)...(151),(174)...(175),(178)
<223> unsure at all n locations

<400> 265

gcgaaactcg anagtgtaag gnttngcatt ncanttgacg aagagtgaga gagtctnatc 60

tgtcgngctc tgatntnnga tcgcatcntc attccganaa tggctgtttc ggctatcact 120

ggagcgaggc taactctagg gangtctctn ncctcttcca cacaacatac gagnntcntc 180

g 181

<210> 266
<211> 342
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(9),(21),(58),(216),(219),(230),(299)
<223> unsure at all n locations

<400> 266

anacactgnt aaagtgaaga nggtgaatgg agatgtgtct gagaacaaca aaggaggnag 60

caaaccttca gcagaaatag atcttccaga tgctgaagtt ggaaaagttc gcttgcgatt 120

tgcacctgaa ccaagtggtt atcttcatat tggacactca aaagcagctt tgttgaacaa 180

tattttgctg agcgatacca gggtcaggtt attgtncgnt ctgatgatan caatcctgct 240

aaagagagca atgaatttgt ggacaacctg attaaagata ttgatacatt gggcatcana 300

tatgaacaaa ttacatatac atcagattac ttccctgagt tg 342

<210> 267
<211> 290
<212> nucleic acid
<213> Glycine max

<400> 267

agctgccgga gataaagcta caacatatac taaaaggata tggcttgacc ttgctgatgc 60

agtgtcttta tcagcaggtg aggaagtaac attgatggat tggggaaatg ccatagtgaa 120

ggaaatagag aaggaccaag atggaaatat catagggttg agtggtgttt tgcatctaga 180

aggatctgtg aagaccacaa aattgaaact cacttggcta cctgagatag atgaactagt 240

tagcctgaca ttagtggagt ttgattatct aattacaaag aaaaagcttg 290

<210> 268

<211> 248
<212> nucleic acid
<213> Glycine max

<400> 268

tcggaattca gcgcgaggga tagcaatcct gctaaagtaa gcaatgaatt tgtggacaac 60

cttattaaag atggtgatac attgggtatc aaatatgaac aaatgacata tacgtcagag 120

tacttccctg agttgatgga gatggctgaa aaattaattc gccagggtaa agcatatgtt 180

gatgacacac cacgtgaaca aatgcaaaaa gagagattgg atggcataga ttctaaatgc 240

agaaataa 248

<210> 269
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 269

ggcattgttg tgtggcggca cgccatggtc gaaggttact atttcaccat tttccaccac 60

tcccacaccc ctcgcacctt cttcttccaa cgacgccgtt tctcagtctc tgctgctttc 120

tccgaacaac aaccaccgcc acccgttcgc gttcgtttcg ctccttctcc caccggaaac 180

ctccacgtcg gcggtgcccg aacggccctc ttcaactact tgttcgcaag gtccaaaggt 240

gggaaatttg tgctgaga 258

<210> 270
<211> 267
<212> nucleic acid
<213> Glycine max

<400> 270

actgagtaga tggagatgga tgaaaaatta gttcgccagg gaaaagcata tgttgatgac 60

atagcacgtg aacaaatgca aaaagagaga atggatggca tagattctaa atgcagaaat 120

aatagtgtag aggagaatct aaaattgtgg aaggaaatgt tggcaggaac agagaggggg 180

ttgcagtgtt gtgtccgtgg caagttggat atgcaggacc caaacaaatc acttagagat 240

cctgtttatt atcgttgcaa tccaatg 267

<210> 271

<211> 245
<212> nucleic acid
<213> Glycine max

<400> 271

tgatgcacga tttcctacag tgcaaggaat tgtgcgtaga ggtttgaaaa ttgaagccct 60

gatacagttt attgttgagc agggggcgtc caaaaatctc aatctcatgg aatgggacaa 120

gctctggacc attaataaga agattattga ccctgtctgt cctagacaca ctgctgtcat 180

tgcagacaga cgtgttttgt tgactctcac tgatggtcct gagtatcctt ttgtccgcat 240

catac 245

<210> 272
<211> 280
<212> nucleic acid
<213> Glycine max

<400> 272

attgcaggaa cagagagggg cttgcagtgt tgtgtccgtg gcaagttgga tatgcaggac 60

ccaaacaaat cacttagaga tcctgtttat tatcgttgca atccaatgcc ccatcataga 120

attggatcca agtataaagt gtatccaact tatgattttg cttgtccata tgttgattct 180

atagaaggaa tcacgcatgc ccttcgatct agtgaatacc atgatcgcaa tgcccagtat 240

tactggattc aagaggacat gggtcttaga aaagttctta 280

<210> 273
<211> 276
<212> nucleic acid
<213> Glycine max

<400> 273

aggttgagtg gtgttttgca tcttgaagga tctgtgaaga ccacaaaatt gaaactcact 60

tggctacctg agatagatga actagttagc ctgacattag tggagtttga ttatctaatt 120

acaaagaaaa agcttgaaga agggaggatt tcattgatgt ggttaaccca tgtaccaaaa 180

aggagacttt agcttatgga gactccaaca tgcgaaatct tcagcgtgga gatttattgc 240

aactggagag aaagggatat ttcaggtgtg atttac 276

<210> 274

<211> 283
<212> nucleic acid
<213> Glycine max

<400> 274

agcaggtatt cgtgctgagt cagattctag agataattat tctcctggat ggaagtattc 60

caactgggaa atgaaagggg ttcctctaag aattgaaatt gggccaaagg atttagcaaa 120

taagcaggtc atcaactttg ccagtgtttt atcaattctc atatttgtca ttttgcttcc 180

acactgttag tttttcagtg aacaccaaat aaatctcttt gaattttgca taggttcgca 240

ctgttcgacg tgataatggt gcaaagatag acattgctag tgc 283

<210> 275
<211> 403
<212> nucleic acid
<213> Glycine max

<400> 275

caaaaccatt tgcgttgtcg cagtcgcagt caaaggccaa ggcaaaaccc taaattgtct 60

cacactttcg tcggaatccg cttttggctt tttccgtgac aagatgccgg cgaaggacga 120

cggctccgac aaggagaagt gccttgatct ctttctgaaa atcggcttag acgagcgcac 180

cgctaaaaac accgtcgcaa acaacaaagt caccgccaat cttactgcag tcatctacga 240

ggccggtgtt attgatggat gcagccgagc ggttggaaat cttctttaca cggttgcaac 300

gaagtaccct gcaaatgcct tgccacatcg cccaacattg ctacagtaca ttgtctcgtt 360

aaggtgaaaa caactgcaca gttagatgca gcattatcat ttc 403

<210> 276
<211> 445
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (22),(36),(45),(53),(65)...(66),(75),(85),(89),(92),
(94)...(95),(102),(105),(119),(145),(158),(171),(224),
(238),(249),(291),(360),(365),(396),(428),(431),(444)
<223> unsure at all n locations

<400> 276

gagaaaatgg cgctgctgtg angcggttgc catggnacga aggtnaatag tgnctctaca 60

tgttnnaatc aatcntaaca ccccnaggna cntnnttatt cnaangacgc aagtttctna 120

atctctgatg tctttagaac aacgnaacat ccgctcgnag tcgttttgct ncttctacaa 180

cggaaacctt acatatcggc atgttccacg aacgggccct cttnaactac ttgttcgnaa 240

ggtccaaang tggaaaattt gtgctgaata attgaggaca ctgacttgga naggtccagt 300

agggagttat gaggaggcca atgctcaaag atctttcttg gcttggactt gattgggatn 360

aaggncctgg tgttgaacgg gattatggcc ttatangcag tctgagagga attcttatcc 420

aaccaatntc nggaaaacct acanc 445

<210> 277
<211> 277
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (26),(133),(215)
<223> unsure at all n locations

<400> 277

gtttattatc gttgcaatcc aatgcnccat catagaattg gatccaagta taaagtgtat 60

ccaacttatg attttgcttg tccatatgtt gattctatag aaggaatcac gcatgccctt 120

cgatctagtg aancccatga ttgcaatgcc cagtattact ggattcaaga ggacatgggt 180

cttagaaaag ttcttatcta cgaatttagc cggtncgaat atggtctaca ctcttctgag 240

caaacgaaag cttttgtggt ttgtacaaaa tgggaaa 277

<210> 278
<211> 255
<212> nucleic acid
<213> Glycine max

<400> 278

agattctaga gataattatt ctcctggatg gaagtattct aattgggaaa tgaaaggtgt 60

tcctctaaga attgaaattg ggccaaagga tttagcaaat aagcaggttc gtgctgttcg 120

acgtgataat ggagcaaaga tagcattgct agtgctgatt tggttgtgga aataaaaaag 180

ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240

attcagatca tacac 255

<210> 279
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 279

agattctaga gataattatt ctcctggatg gaagtattct aattgggaaa tgaaaggtgt 60

tcctctaaga attgaaattg ggccaaagga tttagcaaat aagcaggttc gtgctgttcg 120

acgtgataat ggagcaaaga tagacatgct agtgctgatt tggttgtgga aataaaaaag 180

ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240

attcagatca tacacact 258

<210> 280
<211> 265
<212> nucleic acid
<213> Glycine max

<400> 280

agattctaga gataattatt ctcctggatg gaagtattct aattgggaaa tgaaaggtgt 60

tcctctaaga attgaaattg ggccaaagga tttagcaaat aagcaggttc gtgctgttcg 120

acgtgataat ggagcaaaga tagacattgc agtgctgatt tggttgtgga aataaaaaag 180

ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240

attcagatca tacacacttg ggatg 265

<210> 281
<211> 264
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (180),(255)
<223> unsure at all n locations

<400> 281

tcctgctaaa gaaagcaatg aatttgtgga caaccttatt aaagatattg atacattggg 60

tatcaaatat gaacaaatta catatacgtc agattacttc cctgagttga tggagatggc 120

tgaaaaatta attcgccagg gtaaagcata tgttgatgac acaccacgtg aacaaatgcn 180

aaaagagaga atggatggca tagattctaa atgcagaaat aatagtgtag aggagaatct 240

aaaattgtgg aaggnaatga ttgc 264

<210> 282
<211> 263
<212> nucleic acid
<213> Glycine max

<400> 282

cctgattaaa gatattgata cattgggcat caaatatgaa caaattacat atacatcaga 60

ttacttccct gagttgatgg aaatggctga aaaattaatt cgcgagggta aaacatatgt 120

tgatgacact ccacgtgaac aaatgcaaaa agagagaatg gatggcatag aatctaaatg 180

cagaaataat atagtagagg agaatctaaa actgtggaag gaaatgattg caggaacaga 240

gaggggattg cagtgttgtg tcc 263

<210> 283
<211> 267
<212> nucleic acid
<213> Glycine max

<400> 283

ttgggcatca aatatgaaca aattacatat acatcagatt acttccctga gttgatggaa 60

atggctgaaa aattaattcg cgagggtaaa acatatgttg atgacactcc acgtgaacaa 120

atgcaacaag agagaatgga tggcatagaa tctaaatgca gaaataatat agtagaggag 180

aatctaaaac tgtggaagga aatgattgca ggaacagaga ggggattgca gtgttgtgtc 240

cgtggcaagt tggatatgca ggaccca 267

<210> 284
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 284

atgggagttc agcaaaccca ctccattcat caggagtcgc gagtttcttt ggcaagaagg 60

gcacactgct tttgcaacaa aggatgaagc agatgcagag gttcttgaga ttctggaatt 120

atataggcgt atatacgaag agatttggca gttcctgtca taaagggtaa gaaaagtgag 180

cttgagaagt ttgctggtgg actctacact accagtgttg aggcatttat tccaaacact 240

ggtcgtggta tccaaggtgc aacttctca 269

<210> 285
<211> 422
<212> nucleic acid
<213> Glycine max

<400> 285

gtccaaacgg cagcgagaag acgacagaag gggtcagatg ggagttcagc aaccccactc 60

cattcatcag gagtcgtgag tttctttggc aagaagggca cactgctttt gcttcaaagg 120

aggaagcaga tgcagaggtt cttgagattc tggaattata taggcgtata tacgaagagt 180

atttggcagt tcctgtcata aagggtaaga aaagtgagct tgagaagttt gctggtggac 240

tctacactac tagtgttgag gcatttattc caaacactgg tcgtggtata caaggtgcaa 300

cttctcattg tttgggccaa aattttgcta aaatgtttga gataaacttt gaaaatgaaa 360

agggagagag agcaatggtc tggcagaatt catgggccta tagtactcga actatcggtg 420

tc 422

<210> 286
<211> 240
<212> nucleic acid
<213> Glycine max

<400> 286

aaattatata ggcgtatata cgaagagtat ttggcagttc ctgtcataaa gggtaagaaa 60

agtgagcttg agaagtttgc tggtggactc tacactacca gtgttgaggc atttattcca 120

aacactggtg tggtatccaa ggtgcaactt ctcattgttt gggccaaaat tttgctaaaa 180

tgtttgagat aaactttgaa aatgaaaagg gagagaaagc aatggtctgg cagaattcat 240

<210> 287
<211> 378
<212> nucleic acid
<213> Glycine max

<400> 287

ggaggctaca atttttgagc tacgttatcg aacaaatgtg ggtgagttgc ttgggcgtgt 60

gcgcaaagag ctgccatggg gtgatgcaaa agttgccaag caacttgttg atgcgcaact 120

atatgaacta cttggtgatc ggacagcagc agatgatgaa aagccttcta gaaagaagaa 180

ggagaaacct gctaaagtag aggataaggc agctcctgtt tctacccctg aaaagtcacc 240

tgaagaagac gttaatccat ttttaatatt ccctaatcca gaggaaaatt tcaaggtgca 300

tactgaagtg ccttttagtg atggtagtat tttgagatgt tgcaatacaa gagatctgct 360

tgacaaacac ttaaaagc 378

<210> 288
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 288

aacaaatgca aaaagagaga atggatggca tagaatctaa atgcagaaat aatatagtag 60

aggagaatct aaaactgtgg aaggaaatga ttgcaggaac agagagggga ttgcagtgtt 120

gtgtccgtgg caagttggat atgcaggacc caaacaaatc acttagagat cctgtatatt 180

atcgttgcaa tccaatgccc catcatagaa ttggatccaa gtataaagtg tatccaactt 240

atgatttcgc ttgtccatat gttgatgct 269

<210> 289
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 289

aacaaatgca aaaagagaga atggatggca tagaatctaa atgcagaaat aatatagtag 60

aggagaatct aaaactgtgg aaggaaatga ttgcaggaac agagagggga ttgcagtgtt 120

gtgtccgtgg caagttggat atgcaggacc caaacaaatc acttagagat cctgtatatt 180

atcgttgcaa tccaatgccc catcatagaa ttggatccaa gtataaagtg tatccaactt 240

atgatttcgc ttgtccat 258

<210> 290
<211> 251

<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (65)
<223>

<400> 290

aggcgatctc ggttgggaag cggggaagat ggggaagctt gtaattaagc atttggctgc 60

caacncggtg cagaagaatg gttgttgtta acaggactga agagaaagtt aatgccattc 120

ggaaagagtt gaaggatgtt gagattgtat ttagaccatt ttcagatatg ctggcgtgtg 180

ctgctgaagc tgatgtgatc ttcaccagca cagcgtctga atcaccatgt tctctaaaca 240

gaatgtgcag a 251

<210> 291
<211> 240
<212> nucleic acid
<213> Glycine max

<400> 291

atttgcatag ggctgaacat tcacactgct cccgttgaga tgcgtgagaa gcttgcaatt 60

ccagaatccc attgggctca ggctattaag gacctttgcg ctttgaacca tatcgaagaa 120

gccgcggttc tcagcacgtg taaccgcatg gagatctatg ttgtggctct ttcccagcac 180

cgtggtgtta aggaagttac tgattggatg tctaaggtga gcgggatttc aatacctgag 240

<210> 292
<211> 275
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (105),(240),(264),(269),(271)
<223> unsure at all n locations

<400> 292

aggaagcagc tgttctgagc acctgcaaca gaatggaaat atatgttgtt gctctgtcca 60

agcaccgtgg tgttaaagaa gtcactgaat ggatgtccaa aacangtggg attccagttg 120

cagatctttg ccagcatcag tttctgctat acaacaaaga tgccacacaa caccttttg 180

aagtatctgc aggtcttgat tctctagtgt tgggagaagg tcaatccttg cccaggtgan 240

gcaggttgtc aatttggaca aggnttaang ncttc 275

<210> 293
<211> 276
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (40)...(41),(43)...(46),(62),(64),(66),(72),(74),(78),
(87),(92),(101),(111),(132),(160),(203)
<223> unsure at all n locations

<400> 293

ggtaagaact tgagacaaaa cattgctgct ggtgcagtan ncnnnnagtt catcaactgt 60

antncnggga cntnattnag gctaccngaa gnctcacatg ncatgcaagg ntgttggtca 120

ttggagctgg gnagatcgga agcttgtgat caagcatttn gtggcaaaag ggtgcacaaa 180

gatggtggtt gtcatagagt gangagagag ttgccgcgat ccgtgaagaa atcaagatgt 240

tgagataatc tacaagccac tctcggagat gctcac 276

<210> 294
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 294

ctcgagcgga ataagctact tcatggtccc atgcagcacc taaggtgtga tgggaacaat 60

gatagtagtc tgagtgaagt acttgagaat atgcgcgccc ttaacagaat gtatgatctt 120

gagacagaaa cttccttgat cgaagaaaag atcagagtca agatggaacg ggttcagaag 180

tagattcttc ttcaattggt ttagttttac ttgattactg tgggggctgc aatcctcgcc 240

attttgtaca ctacagtagt tgattgaggc c 271

<210> 295
<211> 130
<212> nucleic acid
<213> Glycine max

<400> 295

ggcaatcatt gctgaagaat ctaagcaatt tgaagcttgg agggactcgc tggaaactgt 60

tcctactatt aagaaattga gggcttatgc tgaaagaatc aggcttgctg agcttgagaa 120

gtgcttaggt 130

<210> 296
<211> 426
<212> nucleic acid
<213> Glycine max

<400> 296

cccacgcgtc cgaacatttg gtggcaaaag gttgcaaaaa gatggtggtt gtcaatagaa 60

ctgatgagag agttgctgca atacgtgaag aactgaagga tattgagatt atctacaaac 120

ccctttcaga aatgctcacc tgtgctggcg aagcagattt agttttcacc agtactgcat 180

cagaaaaccc attattcttg aaagaacatg tcaaggacct tcctcctgca agtcaagaag 240

ttggaggccg tcgctttttc attgatatct ctgttccccg gaatgtgggt tcatgtgtct 300

cagaccttga gtctgtgcga gtttacaatg ttgacgacct taaagaggtt gtggctgcca 360

ataaagagga tcgcctaaga aaagcaatgg acgcacaggc aatcattgct gaaaaatcta 420

agcaat 426

<210> 297
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 297

aggataggct aagaagagcc atggaggctc aagcaatcat tggtgaagaa tcaaaacaat 60

ttgaggcttg gagagactca ttggaaactg ttcctaccat taaaaagttg agggcatatg 120

ctgaaagaat aaggcttgct gagcttgaga agtgcctagg taagatgggt gatgatatca 180

acaagaagac acaaagagct gtggatgatc ttagcagggg tatagtgaat aagttgcttc 240

atgggccaat gcaacacttg aggtgtgatg g 271

<210> 298
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 298

agaaaagcca tggaggctca agcaatcatt ggtgaagaat caaaacaatt tgaggcttgg 60

agagactcat tggaaactgt tcctaccatt aaaaagttga gggcatatgc tgaaagaata 120

aggcttgctg agcttgagaa gtgcctaggt aagatgggtg atgatatcaa caagaagaca 180

caaagagctg tggatgatct tagcaggggt atagtgaata agttggcttc atgggccaat 240

gcaacacttg agtgtgatgg cagtga 266

<210> 299
<211> 289
<212> nucleic acid
<213> Glycine max

<400> 299

cacaattctc ccttcaaagt ttcaatggct gtttcaacca gcttctcggg tgtaaagttg 60

gaggctttgt tgctgaaatg tggttcctcc aatgctgcca ccaccaccac tcatatatca 120

tgttttggca aaaacagaaa gacacttgtt cagagtcaga gaggggctat tcgttgtgag 180

gcttcttctg cttctgatgt tgtggctgat gccaccaaga aagctgctag tgtctctgct 240

cttgagcagc ttaagacctc tgcagctgat aggtatacaa aggaaagga 289

<210> 300
<211> 289
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (17),(77),(187),(230),(279)
<223> unsure at all n locations

<400> 300

cacaattctc ccttcanagt ttcaatggct gtttcaacca gcttctcggg tgtaaagttg 60

gaggctttgt tgctganatg tggttcctcc aatgctgcca ccaccaccac tcatatatca 120

tgttttggca aaaacagaaa gacacttgtt cagagtcaga gaggggctat tcgttgtgag 180

gcttctnctg cttctgatgt tgtggctgat gccaccaaga aagctgctan tgtctctgct 240

cttgagcagc ttaagacctc tgcagctgat aggtatacna aggaaagga 289

<210> 301
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 301

cagggcttga ctcacttgtt cttggggaag gtcaaattct tgctcaggtg aagcaggttg 60

tgaaagctgg acagggagtg cctggttttg ataagaaaat cagtggtttg ttcaagcagg 120

cgatatcggt tgggaagcgg gttagaaccg agactaacat ttcatctgga tcagtttctg 180

taagctcggc tgctgtggag cttgcactga tgaagctacc ggaaattacc tttgctgatt 240

ctggagtgtt ggtggttggt gctggg 266

<210> 302
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 302

cgcgcacatc tatttgaagt ggcgtcaggg cttgactcac ttgttcttgg ggaaggtcaa 60

attcttgctc aggtgaagca ggttgtgaaa gctggacagg gagtgcctgg ttttgataag 120

aaaatcagtg gtttgttcaa gcaggcgata tcggttggga agcgggttag aaccgagact 180

aacatttcat ctggatcagt ttctgtaagc tcggctgctg tggagctgca ctgatgaagc 240

taccggattc ctcctttgct gattctggag tgttg 275

<210> 303
<211> 288
<212> nucleic acid
<213> Glycine max

<400> 303

cttgagcagc ttaagacctc tgcagctgat aggtatacaa aggaaaggag cagcatcatg 60

gttattggac tgagtgtgca tagtacacct gtggaaatgc gtgaaaaact tgccatacca 120

gaagcagaat ggccaagagc cattgcggag tttgtagtct gaatcatatt gaggaagcag 180

ctgttctgag cacctgcaac agaatggaga tatatgttgt tgctctgtcc aagcaccgcg 240

gtgtcaaaga agtcactgaa tggatgtcca aaacaagtgg gatcccgg 288

<210> 304
<211> 299
<212> nucleic acid
<213> Glycine max

<400> 304

agtgtgcata gtacacctgt ggaaatgcgt gaaaaacttg ccataccaga agcagaatgg 60

ccaagagcca ttgcggagtt tgtagtctga atcatattga ggaagcagct gttctgagca 120

cctgcaacag aatggagata tatgttgttg ctcttccaag caccgcgttg tcaaagaagt 180

cactgaatgg atgtccaaaa caagtgggat cccggttgca gacctttgcc agcatcagtt 240

tctgctatac aacaaagatg cgacacagca ccttttttgaa gtatctgctg gtcttgatt 299

<210> 305
<211> 260
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (135),(171),(185),(203),(217),(232),(235)
<223> unsure at all n locations

<400> 305

gagcagcatc atggttattg gactgagtgt gcatagtaca cctgtggaaa tgcgtgaaaa 60

acttgccata ccagaagcag aatggccaag agccattgcg gagtttgtag tctgaatcat 120

attgaggaag cagcngttct gagcacctgc aacagaatgg agatatatgt ngttgctctg 180

tccangcacc gcggtgtcaa agnagtcact gaatggntgt ccaaaacaag tnggntcccg 240

gttgcagact ttgccagcat 260

<210> 306
<211> 440
<212> nucleic acid
<213> Glycine max

<400> 306

gggttctcct gaatccgcaa tggccgtttc aaccactttc tccggtgcca aattggaggg 60

gctattgctc aaatgttctt cctcctcttc ctcaccaccg ccttcaaggt catcattcac 120

cacttttccc ggccaaaaca gaagaaccct cattcagaga ggggttattc gctgcgacgc 180

tcagccctct gatgcatcat ctgttgctcc aaataatgcc accgctctct ccgctcttga 240

gcagctcaag acttctgcag ctgatagata tacaaaggaa agaagcagca ttatcgccat 300

tgggctcagt gtgcacactg cacctgtgga aatgcgtgaa aaacttgcca ttccagaagc 360

agaatggcct agagctattg cagagctgtg tagtctgaat catatttgag aagcagctgt 420

tctgagtacc ctgcatcgaa 440

<210> 307
<211> 272
<212> nucleic acid
<213> Glycine max

<400> 307

ctgaaatcaa ggttgttgct ggtgaccctt ataactcaga cccacaagat ccagaattca 60

tgggtgttga agtcagagag cgtgtacttc caaggagagg aactttctgt tgtcttgacc 120

aaaattaaca tggttgattt gcattgggag ctacagaaga tagagtgtgt ggaacaattg 180

acattgagaa agccctgact gagggtgtca aggcatttga gcctggacta tggctaaagc 240

taatagggga atctatatgt tgatgaagtt aa 272

<210> 308
<211> 254
<212> nucleic acid
<213> Glycine max

<400> 308

gtcttacaac ggctttagag ttggactaaa tgcggagaaa agtggtgacg ttggacgtat 60

aatgattgtt gcaatcactg atggcagagc caatatatca ttgaaaaggt caactgaccc 120

tgaagctgcc gcagctactg atgccccaaa accttcagca caagaattga aggatgaaat 180

tcttgaggtg gccggaaaga tatataaagc aggaatgtct ctccttgtca tcgacactga 240

aaataagttt gtct 254

<210> 309
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 309

actttctgtt gtcttgacca aaattaacat ggttgatttg ccattgggag ctacagaaga 60

tagagtgtgt ggaacgattg acattgagaa agccctgact gagggtgtca aggcatttga 120

gcctggacta ctggctaaag ctaatagggg aatcttatat gttgatgaag ttaatctttt 180

ggatgatcac ttggtggatg tgttgttgga ttctgctgcg gatggaacac agtagagaga 240

gagggaattt cta 253

<210> 310
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 310

tgttactctt aacagagaac aattaaaata cctggttatt gaagctttac ggggcggttg 60

ccagggacat agagctgatc tatttgctgc ccgtgttgca aagtgcttag ctgctttgga 120

gggacgtgaa aaggtttatg tggatgacct aaaaaaagct gtagaattgg tcattctacc 180

ccggtcaatc gttactgaga acccaccaga tcaacaaaac cagcctcctc cccctccgcc 240

tcctccacaa aat 253

<210> 311
<211> 162
<212> nucleic acid
<213> Glycine max

<400> 311

gcatgatgat ctccacatgt ctgtctgtca actaaaacac tattgcgttt catgatatat 60

caaattgtga acatgctatg tgttaatgtt tctttaaagc ataatccata gccccttatg 120

tttaatcaaa ccaaaattat gccctagttt ttttttttt gg 162

<210> 312
<211> 232
<212> nucleic acid
<213> Glycine max

<400> 312

aaaaaagaac agagagagaa gaatgaaatc tatctatctt cttatccgaa gtctgggagg 60

ccaataggaa gcacgccagc tgctacgaat ggtgaataaa agacaaaaga aacaaactgc 120

tacatagcat acagtctgtc ttctcttctc ttctccggtt atggcgtccg ccttgggcac 180

ttcttcaatt gcggttctgc cttcgcgcta cttctcttct tcttcttcca ag 232

<210> 313
<211> 262
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (44),(115)
<223> unsure at all n locations

<400> 313

cacttaatcc aggctcagaa gattgctttt aacgagagcc agangccggt gtacccattt 60

tctgctatag tgggacacga tgagatgaag ctttgccttc tcctaaatgt aattnatccc 120

aagattggag gtgtaatgat catgggggac agaggaacgg ggaaatctac aactgttaga 180

tcattggtag atttgcttcc tgaaatcaag gttgttgctg gtgaccatat attcagaccc 240

agaggatcca gattcatggg tg 262

<210> 314
<211> 280
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (187)
<223>

<400> 314

actctctcta acttcagggc agagctatgg gcggaaattt tatggaggaa ttggaattca 60

tggcatcaag ggaaggtctc agctctcagt tgccaatgtt gccactgaag ttaactctgt 120

agaacaggcc caaagtattg cttctaaaga aagccagagg ccagtatacc cattttctgc 180

catagtngga caagatgaga tgaagctttg tcttctcctt aatgtgattg atcctaagat 240

tggaggtgta atgatcaggg ggataggggc acagggaaat 280

<210> 315
<211> 238

<212> nucleic acid
<213> Glycine max

<400> 315

ttttgctcgg aatttcctgt gtagaaggaa ctcatgaatc ttattgatgt ttaacgacaa 60

tgaaaatctc cacagaaaag gtaaaatgta aataatgaag tagcattata ctcatggaat 120

accacagaat acaaaccgtg ttacatctat gatcctcagc tgaatacctc ataaaatttc 180

tcagtgacaa gtaaacctga gtctatagac tccaagggat cctttctaag acggtgtc 238

<210> 316
<211> 273
<212> nucleic acid
<213> Glycine max

<400> 316

ttagggaagg gctcagctct cggttaccaa tgttgccact gaagttaact ctgtagaaca 60

ggctcagagt attgcttcta aagaaagcca gaggccagta tacccatttt ctgccatagt 120

tggacaagat gagatgaagc tttgtcttct ccttaatgtg attgatccta agattggagg 180

tgtaatgatc atgggggata ggggcacagg gaaatctaca acggtcaggt cattggttga 240

tttacttccc gaaatcaagg ttgttgctgg tga 273

<210> 317
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 317

agactcattg gatcggttga tgttgaggag tctgtgaaaa caggcacaac tgttttccag 60

ccaggcttgc ttgcagaagc tcatagaggt gttttatatg ttgatgaaat taatcttttg 120

gatgagggta tcagtaattt gctccttact gtattgagtg aaggagtaaa tactgttgaa 180

agagagggga tcagtttcaa gcacccttgc aggccccttc tcattgccac ctataaccca 240

gaagagggtg ctgttcgtga acatctgctg gaccgcattg cga 283

<210> 318
<211> 173
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (14),(18)
<223> unsure at all n locations

<400> 318

gctcgaggcg ccgntcanac gacgagccgc gagtgcgtgg cggcgtggga cgaggtggag 60

gagctgagcg cggcggcgag ccacgccaaa tacaagctaa aggaaaagga ctccgacccg 120

ctcgagacct actgcaagga caatccggag accattgagt gcaaaacttt cga 173

<210> 319
<211> 263
<212> nucleic acid
<213> Glycine max

<400> 319

aggaattccg agattcttac aaagccgagc aagagaagct ccaacaacaa attacatcag 60

caaggagtgt tctttcttct gttcagattg atcaagatct caaggtgaaa atctccaagg 120

tgtgtgctga gttgaatgtg gatggattaa gaggagacat agtaacaaat agagctgcaa 180

aagctcttgc tgctctgaag gaaagagaca aagtaagtgc agaggatatt gctactgtca 240

tccctaactg cttgagacac cgt 263

<210> 320
<211> 322
<212> nucleic acid
<213> Glycine max

<400> 320

atagctttgg gagcaaaaac tgcacaaagc tcctcagtgc cccccaagtt ttcctttcaa 60

agcaattttg tgctttgctt tgaatgtctt ccttttcgat ccctacactt caatttgtag 120

caagaggaat ttgttgtttc ctacttagca tgattattta tcaatggcgt ctttggtatc 180

ttcagcattt actcttccaa gctctaaacc tgaccagctt caatcacttg ccccgaaaca 240

tctttttcat cagtcattcc ttcccaagaa agccaattac aatggtagct caaaatcctc 300

tctgaaaatt aaatgtgctg tc 322

<210> 321

<211> 410
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (20),(37),(119)
<223> unsure at all n locations

<400> 321

cagtcattac tttgactcan accccgacta atctggntca gaatctaagg aaagatggga 60

agaagcctag tgcatacatt gctgatacaa ccacagccaa tgctcaggta cgtacactnt 120

ctgagacggt tagacttgac gcaagaacca agctgttgaa tccaaagtgg tatgaaggca 180

tgttgtctac tggatatgag ggtgtacgcg agatcgagaa gagactcacc aatacagtgg 240

ggtggagtgc aacttcaggc caagttgata actgggtgta tgaagaagcc aacacaactt 300

tcattcaaga tgagcaaatg ctgaacaagc tcatgagcac taatccaaac tccttcagga 360

aactggtgca gacattcttg gaagccaatg gacgtggtta ttgggaaact 410

<210> 322
<211> 324
<212> nucleic acid
<213> Glycine max

<400> 322

gaaaaataac acacatttga aactcaaact gaaatgggtg catagctttg gggcaaaaac 60

tacacaaaac tcctcattgc ccccaagttt tttctttcaa agcaattttg cacttttttg 120

ctttcattgt cttcaatttg tagtaagagg aaattgttgt ttcctactta gcttgattat 180

tattatcaat ggcttcttta gtatcttcac aatttacact accaagttct aaacctgacc 240

agcttcattc tcttgctcag aagcatcttt ttctccactc tttccttccc aagaaggcca 300

attacaatgg tagcagctca aaat 324

<210> 323
<211> 340
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (290)

<223>

<400> 323

gaagaagtaa tacatgacaa agaagctcaa tttagcagcc caaatctgaa cgttgcttac 60

aaaatgaatg tccgagaata ccaaagtcta actccctatg ccacagcatt agaagaaaac 120

tggggaaaac ctcctgggaa tctgaattca gatggagaga atctattggt atatgggaaa 180

caatatggta atgtattcat aggtgttcaa cccacatttg gctatgaagg cgatcctatg 240

cggttgcttt tctccaaatc tgcaagtcct catcatggat ttgcagcatn atactctttt 300

gtttgagaaa ttttcaaagc tgaagcggtt cttcattttg 340

<210> 324
<211> 264
<212> nucleic acid
<213> Glycine max

<400> 324

ggcgaagaac agaatgaaga ggaagaacaa gaggatgaca aggatgaaga gaatgaacaa 60

cagcaagaac aattacctga agagtttatc tttgatgctg aaggtggctt ggtagatgaa 120

aaactcctct tctttgccca acaagcacag agacgccgtg ggagggctgg aagggcaaaa 180

aatgttatat tttccgagga tagaggccga tacatcaagc ccatgcttcc aaagggccct 240

gtaaagagat tagctgtaga tgca 264

<210> 325
<211> 246
<212> nucleic acid
<213> Glycine max

<400> 325

caaaatcaag aatcaggcga agaacagaat gaagaggaag aacaagagga tgacaaggat 60

gaagagaatg aacaacagca agaacaatta cctgaagagt ttatctttga tgctgaaggt 120

ggcttggtag atgaaaaact cctcttcttt gcccaacaag cacagagacg ccgtgggagg 180

gctggaaggg caaaaaatgt tatattttcc gaggatagag gccgatacat caagcccatg 240

cttcca 246

<210> 326

<211> 264
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(16)
<223> unsure at all n locations

<400> 326

cnagagcaga gaagantcag agaatggcaa ctatgactgg cgtgagcctt tcatgcccca 60

gggttttctt caacgcatca ggctcaccgc aaaacgcgca tgcttattgt attttgtcca 120

gcagattcta tgacttgaca ggactgcaga atggaattct gaagcgaggg agagagattt 180

tcctcactgg ttgctacctc cgaactccca ctggaggttc tggacattca cgtcttttgc 240

caacagagta tcttgtgatt ctat 264

<210> 327
<211> 284
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (34)...(35),(42),(182)...(183)
<223> unsure at all n locations

<400> 327

cagagaagaa tcagagaatg gcaactatga ctgnngtgag cntttcatgc cccagggttt 60

tcttcaacgc atcaggctca ccgcaaaacg cgcatgctta ttgtattttg tccagcagat 120

tctatgactt gacaggactg cagaatggaa ttctgaagcg agggagagag attttcctca 180

cnngttgcta cctccgaact cccactggag gttctggaca ttcacgtctt ttgccaacag 240

agtatcttgt gattctattg gatgaagact tccagaagga aatt 284

<210> 328
<211> 392
<212> nucleic acid
<213> Glycine max

<400> 328

ggccgataca tcaagcccat gcttccaaag ggccctgtaa agagattagc tgtagatgca 60

acccttagag ctgctgcacc ttatcaaaaa ttgcgaaggg caaaagattc tggaaacaat 120

agaaaggtat ttgtggagaa aacggacatg agggcaaaga gaatggcacg taaggcagga 180

gcattggtga tatttgttgt tgatgcaagt ggaagcatgg cattgaacag gatgcagaat 240

gcaaaaggtg cagcacttaa gcttctggct gaaagttata caagcaggga tcaggtatct 300

ataattccat tccgtggaga tgcagctgaa gttctcctgc caccttctag atcaatttca 360

atggcaagga aacgtcttga aaggcttcca tg 392

<210> 329
<211> 274
<212> nucleic acid
<213> Glycine max

<400> 329

gtggagaaaa cggacatgag ggcaaagaga atggcacgta aggcaggagc attggtgata 60

tttgttgttg atgcaagtgg aagcatggca ttgaacagga tgcagaatgc aaaaggtgca 120

gcacttaagc ttctggctga aagttataca agcagggatc aggtatctat aattccattc 180

cgtggagatg cagctgaagt tctcctgcca ccttctagat caatttcaat ggcaaggaaa 240

cgtcttgaaa ggcttccatg tggtggaggt cccc 274

<210> 330
<211> 247
<212> nucleic acid
<213> Glycine max

<400> 330

attagctgta gatgcaaccc ttagagctgc tgcaccttat caaaaattgc gaagggcaaa 60

agattctgga aacaatagaa aggtatttgt ggagaaaacg gacatgaggg caaagagaat 120

ggcacgtaag gcaggagcat tggtgatatt tgttgttgat gcaagtggaa gcatggcatt 180

gaacaggatg cagaatgcaa aaggtgcagc acttaagctt ctggctgaaa gttatacaag 240

cagggat 247

<210> 331
<211> 292
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(29),(34),(214),(217)
<223> unsure at all n locations

<400> 331

tngagggcaa agagaatggc acgtaaggna gganc atcgg tgatatttgt ggttgatgca 60

agtggaagca tggcattgaa caggatgcag aatgcaaaag gtgcagcact taagcttctg 120

gctgaaagtt atacaagcag ggatcaggtc tctaaattcc attccgtgga gacgcagctg 180

aagttcttct gccaccttct agatcaattg caancgnaag gaaacgtctt gagaggctcc 240

atgtggtgga gggtccccac ttgctcaggt ctacaacggc tgttagagtt gg 292

<210> 332
<211> 378
<212> nucleic acid
<213> Glycine max

<400> 332

agacgggtgc gagaagacga cagaagggga taagtgccat aacacataaa cagaatggct 60

tccacgtttg gcgcatcttc aattaccttc ctctcttcac gatactactc gtctcaggcc 120

cttgccaccg attcaccctc tctaaccaca gtgcagatat ttgggcgcaa gttttgcgga 180

ggaagaaatg gatttcacag cgtcaaggga aggtctctgt tcgcggttgc gagtgttctt 240

gccactcaac ttaactctgc ataataggct cagaagattg cttttaccga gagccagagg 300

tcagtgtacc cattttcggc tatagttgga caggatgaaa tgaagctttg ccttctccta 360

aatgtgattg atcccaaa 378

<210> 333
<211> 277
<212> nucleic acid
<213> Glycine max

<400> 333

aaaaagaatg gcttccacgt ttggcgcatc ttcaattacc ttcctctctt cacgatacta 60

ctcttcccaa tcccttgcca ccgattctcc ctctctaacc acagtgcaga tatttgggcg 120

caagttttgc ggcggaggaa atggatttca cagcgtcaag ggaaggtctc tgttcccggt 180

tgcgagtgtt cttgccactc aacttaactc tgcacaacag gctcagaaga ttgcttttac 240

cgagagccag aggccagtgt acccatttcg gctatag 277

<210> 334
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 334

taaaaagaat ggcttccacg tttggcgcat cttcaattac cttcctctct tcacgatact 60

tctcttccca atcccttgcc accgattctc cctctctaac cacagtgcag atatttgggc 120

gcaagttttg cggcggagga aatggatttc acagcgtcaa gggaaggtct ctgttcccgg 180

ttgcgagtgt tcttgccact caacttaact ctgcacaaca ggctcagaag attgctttta 240

ccgagagcca gaggcc 256

<210> 335
<211> 396
<212> nucleic acid
<213> Glycine max

<400> 335

ggcaactatg actggtgtga gcctttcatg ccccagggtt ttcttcaacg catcagcctc 60

accgcaaaac gcgcatgctg taaagttctc acttccaccc agccaagcag tgcgaccggg 120

tagtatcaag ttgggtcgcg tgatgaggat ccgacccgtt cgcgctgcgc ctgagcgcat 180

atcggagaag gtggaggaga gcataaagaa cgcgcaggag gcgtgcgccg gcgatccgac 240

gagcggcgag tgcgtggcgg cgtgggacga ggtggaggag ctgagcgcgg cggcgagcca 300

cgccagggac aagcaaaagg aaaaggactc cgacccgctc gagaattact gcaaggacaa 360

cccggagacc attgagtgca aaactttcga agactg 396

<210> 336
<211> 356
<212> nucleic acid
<213> Glycine max

<400> 336

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggtggtct tcaacgcatg 60

agcctcaccg cataacgcgc atgctgtaaa gttctcactt ccacccagcc aagcagtgcg 120

accgggtagt atcaagttgg gtcgcgtgat gaggatccga cccgttcgcg ctgcgcctga 180

gcgcatatcg gagaaggtgg aggagagcat aaagaacgcg caggaggcgt gcgccgacga 240

tccgacgagc ggcgagtgcg tgacggcgtg ggacgaggtg gaggagctga gcgcggcggc 300

tagccacgcc agggacacgc aaatggtaat ggacttcgac ccgctcgaga attact 356

<210> 337
<211> 273
<212> nucleic acid
<213> Glycine max

<400> 337

agaatggcaa ctatgactgg tgtgagcctt tcatgcccca gggttttctt caacgcatca 60

gcctcaccgc aaaacgcgca tgctgtaaag ttctcacttc cacccagcca agcagtgcga 120

ccgggtagta tcaagttggg tcgcgtgatg aggatccgac ccgttcgcgc tgcgcctgag 180

cgcatatcgg agaaggtgga ggagagcata aagaacgcgc aggaggcgtg cgccggcgat 240

ccgacgagcg gcgagtgcgt ggcggcgtgg gac 273

<210> 338
<211> 272
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (126)
<223>

<400> 338

aagaatcaga gaatggcaac tatgactggt gtgagccttt catgccccag ggttttcttc 60

aacgcatcag cctcaccgca aaacgcgcat gctgtaaagt tctcacttcc acccagccaa 120

gcagtncgac cgggtagtat caagttgggt cgcgtgatga ggatccgacc cgttcgcgct 180

gcgcctgagc gcatatcgga gaaggtggag gagagcataa agaacgcgca ggaggcgtgc 240

gccggcgatc cgacgagcgg cgagtgcgtg gc 272

<210> 339
<211> 273
<212> nucleic acid

<213> Glycine max

<220>
<221> unsure
<222> (175)
<223>

<400> 339

gaatcagaga atggcaacta tgactggtgt gagcctttca tgccccaggg ttttcttcaa 60

cgcatcagcc tcaccgcaaa acgcgcatgc tgtaaagttc tcacttccac ccagccaagc 120

agtccgaccg ggtagtatca agttgggtcg cgtgatgagg atccgacccg ttcgngtgcg 180

cctgagcgca tatcggagaa ggtggaggag agcataaaga acgcgcagga ggcgtgcgcc 240

ggcgatccga cgagcggcga gtgcgtggcg gcg 273

<210> 340
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 340

cagagaatgg caactatgac tggtgtgagc ctttcatgcc ccagggtttt cttcaacgca 60

tcagcctcac cgcaaaacgc gcatgctgta aagttctcac ttccacccag ccaagcagtg 120

cgaccgggta gtatcaagtt gggtcgcgtg atgaggatcc gacccgttcg cgctgcgcct 180

gagcgcatat cggagaaggt ggaggagagc ataaagaacg cgcaggaggc gtgcgccggc 240

gatccgacga gcg 253

<210> 341
<211> 283
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (64)
<223>

<400> 341

gtaactatga ctggtgtgag cctttcatgc cccagggttt tcttcaacgc atcagcctca 60

ctgnaaaacg cgcatgatgt aaagttctca cttccacaca gcatagaagg tggatcgggt 120

agtatcaagt tgggtcgcgt gatgaggatc cgagccgttc gcgctgcgcc tgagcgcata 180

tcggagaagg tggaggagag catacagaac gcgcaggagg cgtgcgccgg cgatcagttg 240

agcggcgagt gcgtggcggc gtgggacgat gtggaggagc tga 283

<210> 342
<211> 251
<212> nucleic acid
<213> Glycine max

<400> 342

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcatc 60

agcctcaccg caaaacgcgc atgctgtaaa gttctcactt ccacccagcc aagcagtgag 120

accgggtagt atcaagttgg gtcgcgtgat gaggatccga cccgttcgcg ctgcgcctga 180

gcgcatatcg gagaaggtgg gagagcataa agaacgcgcg gaggctgcgc ggcgatccga 240

cgagcggcga t 251

<210> 343
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 343

aaacccccctc cagagaacaa gaatcaaaga atggcaacta tgactggtgt gagcctttca 60

agccccaggg ttttcttcaa cgcatcaccc tcaccgcaaa acacgtacgc cgtaaagttc 120

gcagttccac tcagccaagg gatgcgactt ggtagtgtca ggttgggtcg ggtgatgagg 180

atccgacccg ttcgcgcagt ccagagcgca tttcggagaa ggtggaggag agcataaaga 240

acgcgcagga ggcgtgcgcc ggcgacccga c 271

<210> 344
<211> 257
<212> nucleic acid
<213> Glycine max

<400> 344

gcctttcaag ccccagggtt ttcttcaacg catcaccctc accgcaaaac acgtacgccg 60

taaagttcgc agttccactc agccaaggga tacgacttgg tagtgtcagg ttgggtcggg 120

tgatgaggat ccgacccgtt cgcgcactcc agagcgcatt tcggagaagg tggaggagag 180

cataaagaac gcgcaggagg cgtgcgccgg cgacccgacg agcggcgagt gcgtggcggc 240

gtgggacgag gtggagg 257

<210> 345
<211> 281
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (71),(104)
<223> unsure at all n locations

<400> 345

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcatc 60

agtctcaccg naaaacgcgc atgctgtaaa gttctcactt tcanacagcc aagaagacac 120

aaagggtagt atcaagttgg gtcgcgtgat gaggatccga cccgttcgag ctgcgtctga 180

gcgcatatcg gagaaggtgg aggagagctg aaggaacgcg caggaggcgt gcgccggcga 240

tccgacgagc ggcgagtgcg tagcggcgtg ggacgaggtg g 281

<210> 346
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 346

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcatc 60

agcctcaccg caaaacgcgc atgctgtaaa gttctcactt ccagccagcc tatgagtctt 120

accgggtagt agcaagttgg gtcgcgtgat gatgatccga cccgttcgcg ctgcgcctga 180

gcgcatatcg gagaaggtgg aggagagcaa acagaacgcg ctaggaggcg tacgccggcg 240

atccgacga 249

<210> 347
<211> 240
<212> nucleic acid
<213> Glycine max

<400> 347

cgtccgatag gatgcgagaa gacgacagaa ggggagagaa caagaatcaa agaatggcaa 60

ctatgactgg tgtgagcctt tcaagcccca gggttttctt caacgcatca ccctcgccgc 120

aaaacacgta cgccgtaaag ttcgcagttc cactcagcca agggactcga cttggtagtg 180

tcaggttggg tcgggtgatg aggatgcgag ccgttcgcgc agctccagag cgcagttcgg 240

<210> 348
<211> 91
<212> nucleic acid
<213> Glycine max

<400> 348

gagaatggga actatgactg gtgtgagcgt ttcatgcgcc agggttttct gcaacgcatc 60

agcgtcaggg caaaacgcgc atagtgtaaa g 91

<210> 349
<211> 119
<212> nucleic acid
<213> Glycine max

<400> 349

ctcgagccga gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct 60

tcaacgcatc agcctcacgg caaaacgcgc atgctgtaaa gttctcactt ccacccagc 119

<210> 350
<211> 175
<212> nucleic acid
<213> Glycine max

<400> 350

gaagaatcag agaatggcaa ctatgactgg tgtgagcctt tcatgcccca gggttttctt 60

caacgcatca gcctcaccgc aaaacgcgca tgctgtaaag ttctcacttc cacccagcca 120

agcagtgcga ccgggtagta tcaagttggg tcgcgtgatg aggatccgac ccgtt 175

<210> 351
<211> 285
<212> nucleic acid
<213> Glycine max

<400> 351

gaagaatcag agaatggcaa ctatgactgg tgtgagcctt tcatgcccca gggttttctt 60

caacgcatca ggctcaccgc aaaacgcgca tgctgtaaag ttctctttta ttgtattttg 120

tccagcagat tctatgactt gacaggactg cagaatggaa ttctgaagcg agggagagag 180

attttcctca ctggttgcta cctccgaact cccactggag gttctggaca ttcacgtctt 240

ttgccaacag agtatcttgt gattctattg gatgaagact tccaa 285

<210> 352
<211> 111
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (31),(58),(62),(67)...(68),(70),(97)
<223> unsure at all n locations

<400> 352

gaatggcaac tatgactggt gtgagccttt natgccccag ggttttcttc aacgcatnag 60

cntcacnngn aaaacgcgca tgctgtaaag ttctcanttc cacacaacat a 111

<210> 353
<211> 156
<212> nucleic acid
<213> Glycine max

<400> 353

cttagacctc atcatcataa acccccctcca gagaacaaga aacatccgaa tggcaactat 60

gactggtgtg agcctttcaa gccccagggt tttcttcaac gcatcaccct caccgcaaaa 120

cacgtacgcc gtaaagttcg cagttccact cagcca 156

<210> 354
<211> 136
<212> nucleic acid
<213> Glycine max

<400> 354

tcatcataaa ccccctccag agaacaagaa tcacagaatg gcaactatga ctggtgtgag 60

cctttcaagc cccagggttt tcttcaacgc atcaccctca ccgcaaaaca cgtacgccgt 120

aaagttcgca gttcca 136

<210> 355
<211> 85
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (36),(58)
<223> unsure at all n locations

<400> 355

ctatgactgg tgtgagcctt tcaagcccca gggttntctt caacgcatca ccctcacngc 60

aaaacacgta cgccgtaaag ttcgc 85

<210> 356
<211> 356
<212> nucleic acid
<213> Glycine max

<400> 356

ctctctgaaa tgggtttcgc tttggcatac acagcatctg gttgttgctc aaacctacaa 60

tttcagtctc tgttattcgc tgctgcttca ttgagatcaa aaccgtgtct ctctctctgc 120

aactctactt atcgacccaa acgcattctc cagcgttctc caattgttgg cgctcagtct 180

gaaaatggag ctctggttac ttcggagaag cccgacacta attacggaag acaatacttc 240

cccctcgctg ctgttgtagg ccaagattct ataaaaactg ctcttttact tggtgcaatt 300

gaccccgggg ttggaggaat tgccatatca ggaaagcgag gaactgccaa aactgt 356

<210> 357
<211> 339
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(44),(154),(221),(335)
<223> unsure at all n locations

<400> 357

anatgggttt cgctttggca ttcacagctt cttctacttg ctgntcaaat ctacaatctc 60

agtctctgtt attcgctgct gctgcattga gatcaaaacc gtgtctctct ctctgcaaca 120

cttatcgacc caaacgcatt cggaagcgtt ctcnaattgt tggcgctcaa tctgaaaacg 180

gagctctcgt tacttccgag aagcctgaca ctaattacgg nagacaatac ttccccctcg 240

ctgctgttgt aggccaagat gctataaaaa ctgctctttt acttggggcc attgaccctg 300

ggattggagg aattgccata tcatgaaagc gaggnactg 339

<210> 358
<211> 284
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (40),(101)...(102),(213),(244),(278),(283)
<223> unsure at all n locations

<400> 358

tccggttatg gcgtccgcct tgggcacttc ttcaattgcn gttctgcctt cgcgctactt 60

ctcttcttct tcctcccagc cttccattca cactctctct nnaacttcag ggcagaacta 120

tgggcggaag ttttatggag gaattggaat ccatggcata aagggaaggg ctcagctctc 180

ggttaccaat gttgccactg aagttaactc tgnagaacag gctcagagta ttgcttctaa 240

aganagccag aggccagtat acccattttc tgccatantt ggnc 284

<210> 359
<211> 263
<212> nucleic acid
<213> Glycine max

<400> 359

tggcgtccgc cttgggcact tcttcaattg cggttctgcc ttcgcgctac ttctcttctt 60

cttcttccaa gccttccatt cacactctct ctctaacttc agggcagaac tatgggcgga 120

agttttatgg aggaattgga atccatggca taaagggaag ggctcagctc tcggttacca 180

atgttgccac tgaagttaac tctgtagaac aggctcagag tattgcttct aaagaaagcc 240

agaggccagt atacccattt tct 263

<210> 360
<211> 280

<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (30),(72)
<223> unsure at all n locations

<400> 360

gtctgtcttc tcttctcttc tccggttatn gcgtccgcct tgggcacttc ttcaattgcg 60

gttctgcctt cngggtactc tcttcttctt cttccaagcc ttccattcac actctctctc 120

taacttcagg gcagaactat gggcggaagt tttatggagg aattggaatc catggcataa 180

agggaagggc tcagctctcg gttaccaatg ttgccactga agttaactct gtagaacagg 240

ctcagagtat tgcttctaaa gaaagccaga ggccagtata 280

<210> 361
<211> 278
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (18),(23),(45),(47),(56),(58),(71),(73),(97),(102),
(116),(163),(169),(201),(204),(207),(219),(221),(234)
<223> unsure at all n locations

<400> 361

tctgctccgg ttatggcntc cgncttgggc acttcttcaa ttgcngntct gccttncncg 60

ctacttctct ncntcttctt ccaagccttc cattcanact cnctctctaa cttcanggca 120

gaactatggg cggaagtttt atggaggaat tggaatccat ggnataaang gaagggctca 180

gctctcggtt accaatgttg ncantgnagt taactctgna naacaggctc agantattgc 240

ttctaaagaa agccagaggc cagtataccc attttctg 278

<210> 362
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 362

attgctacat agcacacact ccctcttctc ttctacggtt atggcgtcca cgttgggcac 60

ttcttcaatt gcggttcttc cttcgcgctg catctcttct ttttcttcca agccttccat 120

tcacacactc tctctaactt cagggcagag ctatgggcgg aaattttatg gaggaattgg 180

aattcatggc atcaagggaa ggtctcagct ctcagttgcc aatgttgcca ctgaagttaa 240

ctctgtagaa caggcccaaa gtattgcttc taaagaaagc cag 283

<210> 363
<211> 273
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(178)
<223> unsure at all n locations

<400> 363

gnaacaaatt gctacatagc acacactccc tcttctcttc tacggttatg gcgtccacgt 60

tgggcacttc ttcaattgcg gttcttcctt cgcgctgcat ctcttctttt tcttccaagc 120

cttccattca cacactctct ctaacttcag ggcagagcta tgggcggaaa ttttatgnag 180

gaattggaat tcatggcatc aagggaaggt ctcagctctc agttgccaat gttgccactg 240

aagttaactc tgtagaacag gcccaaagta ttg 273

<210> 364
<211> 259
<212> nucleic acid
<213> Glycine max

<400> 364

caaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60

cacttcttca attgcggttc ttccttcgcg ctgcatctct tctttttctt ccaagccttc 120

cattcacaca ctctctctaa cttcagggca gagctatggg cggaaatttt atggaggaat 180

tggaattcat ggcatcaagg gaaggtctca gctctcagtt gccaatgttg ccactgaagt 240

taactctgta gaacaggcc 259

<210> 365
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 365

acggctgcga aagacgacag aaggggacgg ttatggcgtc cacgttgggc acttcttcaa 60

ttgcggttct tccttcgcgc tgcatctctt ctttttcttc caagccttcc attcacacac 120

tctctctaac ttcagggcag agctatgggc ggaaatttta tggaggaatt ggaattcatg 180

gcatcaaggg aaggtctcag ctctcagttg ccaatgttgc cactgaagtt aactctgtag 240

aacaggccca aag 253

<210> 366
<211> 243
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (24)
<223>

<400> 366

aataaaagac aaaagaaaca aaangctaca tagcatacag tctgtcttct cttctcttct 60

ccggttatgg cgtccgcctt gggcacttct tcaattgcgg ttctgccttc gcgctacttc 120

tcttcttctt cttccaagcc ttccattcac actctctctc taacttcagg gcagaactat 180

gggcggaagt tttatggagg aattggaatc catggcataa agggaagggc tcagctctcg 240

gtt 243

<210> 367
<211> 259
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (191)
<223>

<400> 367

gcacacactc cctcttctct tctacggtta tggcgtccac gttgggcact tcttcaattg 60

cggttcttcc ttcgcgctgc atctcttctt tttcttccaa gccttccatt cacacactct 120

ctctaacttc agggcagagc tatgggcgga aattttatgg aggaattgga attcatgggc 180

atcaagggaa ngtctcagct ctcagttgcc aatgttgcca ctgaagttaa ctctgtagaa 240

caggcccaaa gtattgctt 259

<210> 368
<211> 163
<212> nucleic acid
<213> Glycine max

<400> 368

caaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60

cacttcttca attgcggttc ttccttcgcg ctgcatctct tctttttctt ccaagccttc 120

cattcacaca ctctctctaa cttcagggca gagctatggg cgg 163

<210> 369
<211> 151
<212> nucleic acid
<213> Glycine max

<400> 369

gaaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60

cacttcttca attgcggttc ttccttcgcg ctgcatctct tctttttctt ccaagccttc 120

cattcacaca ctctctctaa cttcagggca g 151

<210> 370
<211> 232
<212> nucleic acid
<213> Glycine max

<400> 370

gaagaatgaa atctatctat cttcttatcc gaagcccgtg aggccaataa gaagcacgtc 60

agctgctatg aatggtgaat aaaacacaaa agaaacaaat tgctacatag cacacactcc 120

ctcttctctt ctacggttat ggcgtccacg ttgggcactt cttcaattgc ggttcttcct 180

tcgcgctgca tctcttcttt ttcttccaag ccttccattc acacactctc tc 232

<210> 371
<211> 107
<212> nucleic acid
<213> Glycine max

<400> 371

tacggctgga agacgacaga aggggaata aaacacaaaa gacacaaatt gctacatagc 60

acacactccc tcttctcttc tacggttatg gcgtccacgt tgggcac 107

<210> 372
<211> 235
<212> nucleic acid
<213> Glycine max

<400> 372

ctcgagccga atcggctcga ggcagattaa aagggatgga attaccaagc ttgttattct 60

tccactttat ccacaatttt caatatcaac cagtggctca agcctacgtc tactggagag 120

tatattccga gaggatgagt atctagtcaa catgcagcac acagtaatac catcatggta 180

tcaacgtgaa ggatacataa aggccatggc aaatttgatt gagaaagagt tgaga 235

<210> 373
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 373

gaccaggcac ttgcaattaa aatggctttg gaagcaaagg gcatctcttc aaatgtctac 60

gttgggatgc gatactggta cccatttacc gaagaagcaa ttcagcaaat taagagggac 120

agaataacaa ggcttgtggt actacccctt tatccccagt tttctatatc cacaactgga 180

tcaagcatcc gtgttcttga gcatatattc agggaagatg cctacttgtc taagctccct 240

gtttccatta 250

<210> 374
<211> 254
<212> nucleic acid
<213> Glycine max

<400> 374

ggaatgtgtt gatttgatca tggaagagct tgaaaagaga aagataacta atgcatacac 60

ccttgcttat cagagtagag ttggacctgt ggaatggtta aaaccctata cagatgagac 120

aataattgaa cttgggaaaa agggagtaaa aagcctgctg gctgtaccaa ttagctttgt 180

cagcgagcat attgaaactc tcgaagaaat tgatgttgag tacaaagaat tggctctaaa 240

ctctggtata gaaa 254

<210> 375
<211> 248
<212> nucleic acid
<213> Glycine max

<400> 375

gaaaaagttg gtgtgctgct tctcaatcta ggaggaccag agacattgaa tgacgttcaa 60

ccttttctgt ttaatctttt tgcagatcct gatatcattc gtcttccaag gttgtttcgg 120

tttctccagc gaccattggc aaaattgatt tctgtacttc ggtctcctaa atccaaggaa 180

gggtatgctg ctattggtgg tggctctcct ttacgcaaaa ttacagatga ccaggcactc 240

gcaattaa 248

<210> 376
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 376

aattgacatg gagtacaagg aattggctct tgaatctggc atcaagaatt gggcacgtgt 60

acctgccctt ggtgttaccc cttccttcat tacagattta gcagatgcag taatagaagc 120

tctcccatca gcaacagcaa tatatgcacc gaccagaacc tctgaagatg ttgatcatga 180

cccagttaga tattttatca agatgttctt tggttcaatc ttggcattca tcttgttctt 240

gtcacccaaa atgatcacgg cattcaggaa tcatg 275

<210> 377
<211> 288
<212> nucleic acid
<213> Glycine max

<400> 377

ccttccttca tacagattta gcagatgcag taatagaagc tctcccatca gcaacagcaa 60

tatatgcacc gaccagaacc tctgaagatg ttgatcatga cccagttaga tattttatca 120

agatgttctt tggttcaatc ttggcattca tcttgttctt gtcacccaaa atgatcacgg 180

cattcaggaa tcatgtcatt tagaagaatt aaatcctgct tgctgaattc aatctgcaag 240

catatagatg aagcctattg atagcaacaa agtatacttt gatttttt 288

<210> 378
<211> 282
<212> nucleic acid
<213> Glycine max

<400> 378

atggaaaaaa gggagtgaaa agtctgctcg ctgttccaat tagcttcgtc agtgagcata 60

ttgaaactct agaagaaatt gatgttgaat acaaagagtt ggctctagaa tctggtatag 120

aaaagtgggg ccgtgttcct gctctaggat gcgaacctac cttcatttct gatttggcag 180

atgccgttat tgagagtctc ccatatgttg gtgccatgac agcttcagac cttgaagctc 240

aacaatcctc gttccatggg cagtgtagaa gagttattgg ca 282

09523318.012059

<210> 379
<211> 237
<212> nucleic acid
<213> Glycine max

<400> 379

catccgtgtt cttgagcata tattcaggga agatgcctac ttgtctaagc tccctgtttc 60

cattataaac tcttggtatc aacgagaagg ttatattaag tcaatggcta acttaattca 120

gaaagagctc cagagttttt ctgaaccaaa agaggtaatg atatttttca gtgcccatgg 180

tgtacctgtc agttacgttg aggaagctgg ggatccatac cgagaccaaa tggagga 237

<210> 380
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 380

actggatcaa gcatccgtgt tcttgagcat atattcaggg aagatgccta cttgtctaac 60

ctccctgttt ccattataaa ctcttggtat caacgagaag gttatattaa gtcaatggct 120

aacttaattc agaaagagcg ccagagtttt tcttaaccaa aagaggtaat gatatttttc 180

agtgcccatg gtgtacctgt caagtacgtt gagggagctg ggatccata ccgagaccaa 240

atggaggagt gca 253

<210> 381
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 381

ttcttgagca tatattcagg gaagatgcct acttgtctaa gctccctgtt tccattataa 60

actcttggta tcaacgagaa ggttatatta agtcaatggc taacttaatt cagaaagagc 120

tccagagttt ttctgaacca aaagaggtaa tgatattttt cagtgcccat ggtgtacctg 180

tcagttacgt tgaggaagct ggggatccat accgagacca aatggaggag tgcatcttct 240

tgatcatgca agagttgaaa gctagagga 269

<210> 382
<211> 251
<212> nucleic acid
<213> Glycine max

<400> 382

aagagctcca gagtttttct gaaccaaaag aggtaatgat atttttcagt gcccatggtg 60

tacctgtcag ttacgttgag gaagctgggg atccataccg agaccaaatg gaggagtgca 120

tcttcttgat catgcaagag ttgaaagcta gaggaattag taatgagcac actcttgctt 180

atcagagtcg agtgggtcct gtacagtggc tgaaaccata tactgatgaa gttctcgttg 240

agcttggcca a 251

<210> 383
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 383

ttaattcaga aagagctcca gagtttttct gaaccaaaag aggtaatgat atttttcagt 60

gcccatggtg tacctgtcag ttacgttgag gaagctgggg atccataccg agaccaaatg 120

gaggagtgca tcttcttgat catgcaagag ttgaaagcta gaggaattag taatgagcac 180

actcttgctt atcagagtcg agtgggtcct gtacagtggc tgaaaccata tactgatgaa 240

gttctcgttg agcttggcca aaaaggtgtg aagag 275

<210> 384
<211> 168
<212> nucleic acid
<213> Zea mays

<400> 384

ctttcttaca tatattcagc accacctctc aagctcgagc agaatggatg gattgggaac 60

ttcgctctgg gtgcgagtta catcagcttg ccctggtggg ctggccaggc gttatttgga 120

actcttacac cagatatcag tgtcttgact actttgtaca gcatagct 168

<210> 385
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 385

attgaagggg ataggactct ggggcttcag tcacttcctg ttgcttttgg gatggaaact 60

gcaaaatgga tttgtgttgg agcaattgat atcactcaat tatctgttgc aggttaccta 120

ttgagcaccg gtaagctgta ttatgccctg gtgttgcttg ggctaacaat tcctcaggtg 180

ttctttcagt tccagtactt cctgaaggac cctgtgaagt atgatgtcaa atatcaggca 240

agcgcacaac cattct 256

<210> 386
<211> 411
<212> nucleic acid
<213> Zea mays

<400> 386

cccacgcgtc cgcccacgcg tccgcccacg cgtccgccca cgcgtccgag cacacacggg 60

cgcatcaggg cctagctcga gtccactact tgaaaaacag gaaaaaggtt gcgtttgagg 120

agatgacgaa gctcgtggag atagccagcc actgcgcgtc ggcatatgaa aagcggtcgg 180

aatacggtga gcgcgaagct gcgaggagcg acctgaacat ggcgacgctt cttgatccta 240

ccaggactta tccttacaga tacagagcag ctgtactgat ggacgaaggc aaggaggagg 300

aggcgatcgc ggagctgtca ggagccatag ctttcaagcc ggaccttcag ctgctgcacc 360

ttcgcgcggc gttcttcgac tccatgggcg agcgcgagag cgccctgtgg g 411

<210> 387
<211> 484
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (1),(9)...(10),(57),(61)...(62),(446)
<223> unsure at all n locations

<400> 387

ntggggttnn ctagagggga ggggggcaat tgatggaagt cttcaattcc gtttcgnacc 60

nncccgcccc acgcgtccgc cgacgccaaa aacgcgaagg cgaacgccat ggccccgaat 120

aagagcaccc gcggcggatg actccagttt caaccagctg ctcggtatca aaagtgctta 180

gccagggaac ggccttttgg aaaatccgcc ttaacttaac taagccggtg acatggcctc 240

cgcttgtttg gggagttctc tgtggagcag ctgcctctgg aaatttccac tggacagttg 300

aagatgtcgc aaaatctatt gtatgcatga taatgtctgg tccatgcctt acaggataca 360

cacagacact taatgactgg tatgatcgag acattgatgc aattaatgag ccttatcggc 420

ctattccatc aggtgctata tcaganaacg aggtaataac ccagatctgg gtgctattgc 480

tagg 484

<210> 388
<211> 301
<212> nucleic acid
<213> Zea mays

<400> 388

ccaaggcccc gaataacgca cccgcggcgg atggctccag tttcaaccag ctgctcggta 60

tcaagggtgc taagcaagac agcgacatgt ggcagatgcg tcttcaactt actaagccgg 120

tgacatggcc tccgcttgtt tggggagttc tctgtggagc agctgcctct ggaaatttcc 180

agtggacagt tgaagatgtc gcaaaatcta ttgtatgcat gataatgtct ggtccatgcc 240

ttacaggata cgcacagaca cttaatgact ggtatgatcg agacattgat gcaattagtg 300

a 301

<210> 389
<211> 284
<212> nucleic acid
<213> Zea mays

<400> 389

tgaagatgtc gcaaaatcta ttgtatgcat gataatgtct ggtccatgcc ttacaggata 60

cacacagaca cttaatgact ggtatgatcg agacattgat gcaattaatg agccttatcg 120

gcctattcca tcaggtgcta tatcagaaaa cgaggtaata acccagatct gggtgctatt 180

gctaggaggg cttggattgg gtgctttgtt agatgtgtgg gcaggacatg attttcctat 240

tgtgttttat cttgctgtgg gtggctcctt actttcttac atat 284

<210> 390
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 390

caattaatga gccttatcgg cctattccat caggtgctat atcagaaaac gaggtaataa 60

cccagatctg ggtgctattg ctaggagggc ttggattggg tgctttgtta gatgtgtggg 120

caggacatga ttttcctatt gtgttttatc ttgctgtggg tggctcccta ctttcctaca 180

tatattcagc accacctctc aagctccagc agaatggatg gaatgggaac ttcgctctgg 240

gtgcgagtta catcag 256

<210> 391
<211> 318
<212> nucleic acid
<213> Zea mays

<400> 391

gcatgataat gtctggtcca tgccttacag gatacacaca gacacttaat gactggtatg 60

atcgagacat tgatgcaatt aatgagcctt atcggcctat tccatcaggt gctatatcag 120

aaaacgaggt aataacccag atctgggtgc tattgctagg agggcttgga ttgggtgctt 180

tgttagatgt gtgggcagga catgattttc ctattgtgtt ttatcttgct gtgggtggct 240

ccttactttc ttacatatat tcagcaccac ctctcaagct caagcagaat ggatggattg 300

ggaacttcgc tctgggtg 318

<210> 392
<211> 272
<212> nucleic acid
<213> Zea mays

<400> 392

ctggtgtaag agttccaaat aacgcctggc cagcccacca gggcaagatg atgtaactct 60

aacccagagc gaagttccca atccatccat tctgcttgag cttgagaggt ggtgctgaat 120

atatgtaaga aagtaaggag ccacccacag caagataaaa cacaatagga aaatcatgtc 180

ctgcccacac atctaacaaa gcacccaatc caagccctcc tagcaatagc acccagatct 240

gggttattac ctcgttttct gatatagcac ct 272

<210> 393
<211> 288
<212> nucleic acid
<213> Zea mays

<400> 393

cacacagaca cttaatgact ggtatgatcg agacattgat gcaattaatg agccttatcg 60

gcctattcca tcaggtgcta tatcagaaaa cgaggtaata acccagatct gggtgctatt 120

gctaggaggg cttggattgg gtgctttgtt agatgtgtgg gcaggacatg attttcctat 180

tgtgttttat cttgctgtgg gtggctcctt actttcttac atatattcag caccacctct 240

caagctcaag cagaatggat ggattgggaa cttcgctctg ggtgcgag 288

<210> 394
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 394

caattcctca ggtgttcttt cagttccagt acttcctgaa ggaccctgtg aagtatgatg 60

tcaaatatca ggcaagcgca caaccattct tcgtactggg cctactggtg acagcactgg 120

caaccagcca ttaatgaagg caaacttaaa cagaacgagc aaccgttctg ataccgaaga 180

ggcacgtctg gtgaccatta ataagctagc tgcttgtgtg cagggtagga agagaacgtc 240

ttttacttg tagaac 256

<210> 395
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 395

caattcctca ggtgttcttt cagttccagt acttcctgaa ggaccctgtg aagtatgatg 60

tcaaatatca ggcaagcgca caaccattct tcgtactggg cctactggtg acagcactgg 120

caaccagcca ttaatgaagg caaacttaaa cagaacgagc aaccgttctg ataccgaaga 180

ggcacgtctg gtgaccatta ataagctagc tgcttgtgtg cagggtagga agagaacgtc 240

ttttacttg tagaacacag atcgattttg taagggttat 280

<210> 396
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 396

cccacgcgtc cgtattcagc accacctctc aagctcaagc agaatggatg gattgggaac 60

ttcgctctgg gtgcgagtta catcagcttg ccctggtggg ctggccaggc gttatttgga 120

actcttacac cagatatcat tgtcttgact actttgtaca gcatagctgg gctagggatt 180

gctattgtaa atgatttcaa gagtattgaa ggggatagga ctctggggct tcagtcactt 240

cctgttgctt ttgggatgga aactgcaaaa tggatttgtg ttggagc 287

<210> 397
<211> 152
<212> nucleic acid
<213> Zea mays

<400> 397

cagcaccacc tctcaagctc aagcagaatg gatggattgg gaacttcgct ctgagtgcga 60

gttacatcag cttgccctgg tgggctggcc aggcgttatt tggaactctt acaccagata 120

tcattgtcta gactacttcg tacagcatag ct 152

<210> 398

<211> 298
<212> nucleic acid
<213> Zea mays

<400> 398

agggcttcgt gtcggaggcg gagtccggca agaggctggc gcaggtggtc agcgacccca 60

gcctcaccaa gtcgggggtg tactggagct ggaacaagga ctcggcgtcg ttcgagaacc 120

agctgtcgca ggaggccagc gatccggaga aggccaagaa gctctgggag atcagcgaga 180

agctcgtggg gcttccttga gctccccgca caggaaaaag cgacatgatg aatctgtcga 240

gcagaggagc tttcgcttcg ttgtattatg tgtaacatta gcatccattt gtttgttt 298

<210> 399
<211> 218
<212> nucleic acid
<213> Zea mays

<400> 399

ggggagttcg acggcgccaa ggcatacaag gacagcaagg tgtgcaacat gctgacgatg 60

caggagttcc accgccggta ccacgaggag acgggcgtga ccttcgcgtc gctctacccg 120

ggctgcatcg ccaccagggg cctgttccgc gaacaaattc cgctgttccg gctgtgctcc 180

gcccgccgtt ccagaagtac atcaccaggg tacgtctc 218

<210> 400
<211> 317
<212> nucleic acid
<213> Zea mays

<400> 400

gtcacttctc cacgaacaaa agcgcatcga tctcgctgtc gtcactcctc gtcacccagc 60

cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gctactccca tacaccctct 120

catccgtccc caagaagtgc agcctcgccg tcgcggcgaa tgacacggca ttccttagcg 180

tatcctacaa gaaggtgcac gcggcgtcac tgtccgtgaa aacgcggtgg cgactaccgc 240

gcctgtggcc acgccggggt ccagcacggc ggtcaacgat gggaagaaga ccgtgcggca 300

tgccgtggtg gtgatca 317

<210> 401

<211> 172
<212> nucleic acid
<213> Zea mays

<400> 401

gcagaagtcc gactacccgt cccggcggct tatcatcctc gggtccatca ccggcaacag 60

caacacgctg gccgggaaca tcccgcccaa ggccgggctg ggcgaccttc gcgggctcgc 120

ggcggggctg cgcggccaga acggctctgc catgatcgac ggcttcgaga gc 172

<210> 402
<211> 313
<212> nucleic acid
<213> Zea mays

<400> 402

aaatcctcag tcctcaggct gctcacagtt cgtgctatcc gctcgcgctc ccggtagtct 60

gcctgctcgg caattcggca tggcgctcca ggccgcgacg tccttcctcc cctcggccct 120

ctcggcgcgc aaggaggggt cgtcggtgaa ggactcggcg ttcttgggtg tccatctcgc 180

ggacgatggc ctcaagctgg agaccgctgc tctgggccta cgcaccaaga gggtgatcac 240

gtcggtggcc atccgcgcgc aggcggcagc ggtgtcctca ccatcagtat accccgcgtc 300

gccgtccggc aag 313

<210> 403
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 403

cccagccaaa tcctcagtcc tcaggctgct cacagttcgt gctatccgct cgcgctcccg 60

gtagtctgcc tgctcggcaa ttcggcatgg cgctccaggc cgcgacgtcc ttcctccccct 120

caggccctct gcggcgcgca aggtaggggt cgtcggtgaa ggactcggcg ttcttgggtg 180

tccatctcgc ggacgatggc ctcaagctgg agaccgctgc tatgggccta cgcaccaaga 240

gggtgatcac gt 252

<210> 404
<211> 399
<212> nucleic acid

<213> Zea mays

<400> 404

accacgcgtc cgcatacaag gacagcaagg tgtgcaacat gctgacgatg caggagttcc 60

accgccggta ccacgaggag acgggcgtga ccttcgcgtc gctctacccg ggctgcatcg 120

ccaccacggg cctgttccgc gagcacatcc cgctgttccg cctgctcttc ccgccgttcc 180

agaagtacat caccaagggg tacgtctccg aggaggaggc cgggaagcgg ctggcgcagg 240

tggtgagcga ccccagcctg accaagtccg gcgtgtactg gagctggaac aagaactccg 300

cgtccttcga gaaccagctc tctgaggagg ccagcgacgc cgacaaggcc aagaagctct 360

gggagatcag cgagaagctc gtcggcttgg cgtgatgcc 399

<210> 405
<211> 442
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (78),(399)
<223> unsure at all n locations

<400> 405

acaccggcac accaacacgc tggccgggaa catcccgccc aaggccgggc tgggcgacct 60

ccgcggcgtg gcggcggngc tgcgcggcca gaacggctct gccatgatcg acggctccga 120

gagcttcgac ggcgccaagg cgtacaagga cagcaagatc tgcaacatgc taacaatgca 180

ggagctgcac cggcggtacc acgaggagac gggcatcacg ttcgcgtcgc tctacccggg 240

gtgcatcgcc accacggggc tgttccgcga gcacatcccg ctgttccggc tgctcttccc 300

gccgttccag aagttcgtca ccaaaggctt cgtgtcggaa gcggagtccg gcaagaagct 360

ggcgcatgtg gtcagcgacc ccagcctcac caagtcggng gtgtactgga gctggaacaa 420

ggactccgcg tcgttcgaga ac 442

<210> 406
<211> 442
<212> nucleic acid
<213> Zea mays

<400> 406

gcgatcacgg gcgacgccaa cacgctggcc ggtgacatct cgcccaaggc cgggctgggc 60

gacctccgcg gcctcgcggc ggggctgcgc ggccagaacg gctctgccat gatcgacggc 120

tccgagagct tcgacggcgc caaggcgtac aaggacagca agatctgcaa catgctcacc 180

atgcaggagc tgcaccggcg gtaccacgag gagacgggca tcacgttcgc gtcgctctac 240

ccggggtgca tcgccaccac ggggctgttc cgcgagcaca tcccgctgtt ccgcctgctc 300

ttcccgcctt tccagaagtt cgtcaccaag ggcttcgtgt cggaggcgga gtccggcaag 360

aggctggcgc atgtggtcag cgaccccagc cttaccaaag tcggggtgta ctggagctgg 420

aacaggggac tcgcgtcgtt cg 442

<210> 407
<211> 352
<212> nucleic acid
<213> Zea mays

<400> 407

ctcctggcgc gcctgctcct ggacgacatg cagaagtccg actacccgtc ccggcgagtc 60

atcatcctcg gctccatcac cggcaacacc aacacgctgg ccgggaacat cccgcccaag 120

gccgggctgg gcgacctgcg cggcctcgcg gcggggctgc gcggccagaa cggctctgcc 180

atgatcgacg gctccgagag cttcgacggc gccaaggcgt acaaggacag caagatctgc 240

aacatgctca ccatgcagga gctgcaccgg cggtaccacg aggagacggg catcacgttc 300

gcgtcgctct acccggggtg catcgccacc acggcgctgt tccgcgagca ca 352

<210> 408
<211> 277
<212> nucleic acid
<213> Zea mays

<400> 408

ctggccggga acatcccgcc caaggccggg ctgggcgacc tccgcggcct cgcggcgggg 60

ctgcgcggcc agaacggctc tgccatgatc gacggctccg agagcttcga cggcgccaag 120

gcgtacaagg acagcaagat ctgcaacatg ctaacaatgc aggagctgca ccggcggtac 180

cacgaggaga cgggcatcac gttcgcgtcg ctctacccgg ggtgcatcgc caccacgggg 240

ctgttccgcg agcacatccc gctgttccgg ctgctct 277

<210> 409
<211> 272
<212> nucleic acid
<213> Zea mays

<400> 409

gacggcgcca aggcatacaa ggacagcaag gtgtgcaaca tgctgacgat gcaggagttc 60

caccgccggt accacgagga gacgggcgtg accttcgcgt cgctctaccc gggctgcatc 120

gccaccacgg gcctgttccg cgagcacatc ccgctgttcc gcctgctctt cccgccgttc 180

cagaagtaca tcaccaaggg gtacgtctcc gaggaggagg ccgggaagcg gctggcgcag 240

gtggtgagcg accccagcct gaccaagtcc gg 272

<210> 410
<211> 309
<212> nucleic acid
<213> Zea mays

<400> 410

cactggccgg gaacatcccg cccaaggccg ggctgggcga cctccgcagc ctcgcggcgg 60

ggctgcgcgg ccagaacggc tctgccatga tcgacggctc cgagagcttc gacggcgcca 120

aggcgtacaa ggacagcaag atctgcaaca tgctcaccat gcaggagctg caccggcggt 180

accacgagga gacgggcatc acgttcgcgt cgctctaccc ggggtgcatc gccaccacgg 240

ggctgttccg cgagcacatc ccgctgttcc gcctgctctt cccgccgttc cagaagttcg 300

tcaccaagg 309

<210> 411
<211> 264
<212> nucleic acid
<213> Zea mays

<400> 411

cagaacggct ctgccatgat cgacggctcc gagagcttcg acggcgccaa ggcgtacaag 60

gacagcaaga tctgcaacat gctcaccatg caggagctgc accggcggta ccacgaggag 120

acgggcatca cgttcgcgtc gctctacccg gggtgcatcg ccaccacggg gctgttccgc 180

gagcacatcc cgctgttccg cctgctcttc ccgcctttcc agaagttcgt caccaagggc 240

ttcgtgtcgg aggcggagtc cggc 264

<210> 412
<211> 267
<212> nucleic acid
<213> Zea mays

<400> 412

gctcggtgat gatcgacggc ggggagttcg acggcgccaa ggcatacaag gacagcaagg 60

tgtgcaacat gctgacgatg caggagttcc accgccggta ccacgaggag acggccgtga 120

ccttcgggtc gctctacccg ggctgaatgg caacaacggg cctgttccgg gaacacatcc 180

cgctgttccg gctgctcttc ccgccgttcc agaagtacat caccaagggg gtacgtctcc 240

gaggaggagg ccgggaagcg ctggcgc 267

<210> 413
<211> 302
<212> nucleic acid
<213> Zea mays

<400> 413

ggcgtacaag gacagcaaga tctgcaacat gctcaccatg caggagctgc accggcggta 60

ccacgaggag acgggcatca cgttcgcgtc gctctacccg gggtgcatcg ccaccacggg 120

gctgttccgc gagcacatcc cgctgttccg cctgctcttc ccgccgttcc agaagttcgt 180

caccaagggc ttcgttccga agcggaaccg gcaagaagct tgcgcaggtg gtcagcgacc 240

ccagcctcac caagtcgggg gtgtactgga gctggaacaa ggactcggcg tcgttcgaga 300

ac 302

<210> 414
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 414

ggcgcgcctg ctcctggacg acatgcagaa gtccgactac ccgtcccgcc gcctcatcat 60

cctcggctcc atcaccggca acaccaacac gctggccggg aacatcccgc ccaaggccgg 120

gctgggcgac ctccgcagcc tcgggcgggg ctgcgcggcc agaacggctc tgccatgatc 180

gacggctccg agagcttcga cggcgccaag gcgtacaagg acagcaagat ctgcaacatg 240

ctaacaatgc aggagctgca ccggcggtac cacgaggaga cgggcatcac g 291

<210> 415
<211> 268
<212> nucleic acid
<213> Zea mays

<400> 415

cgagcacatc ccgctgttcc gcctgctctt cccgccgttc cagaagtaca tcaccaaggg 60

gtacgtctcc gaggaggagg ccgggaagcg gctggcgcag gtggtgagcg accccagcct 120

gaccaagtcc ggcgtgtact ggagctggaa caagaactcc gcgtccttcg agaaccagct 180

ctctgaggag gccagctgac gcgacaaggc caagaagctc tgggagatcc gcgagaagct 240

cgtcggcttg gcgtgatgcc caccgtgc 268

<210> 416
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 416

cccacgcgtc cgaacacgct ggccgggaac atcccgccca aggccgggct gggcgacctc 60

cgcggcctcg ggcggggctg cgcggccaga acggctctgc caggatcgac ggctccgaga 120

gcttcgacgg cgccaaggcg tacaaggaca gcaagatctg caacatgctc accatgcagg 180

agctgcaccg gcggtaccac gaggagacgg gcatcacgtt cgcgtcgctc tacccggggt 240

gcatcgccac cacggggctg ttccgcgagc acatcccgct gttccgcctg ctcttc 296

<210> 417
<211> 255
<212> nucleic acid
<213> Zea mays

<400> 417

gcctgctctt cccgccattc cagaagtaca tcaccaaggg gtacgtctcc gaggaggagg 60

ccgggaagcg gctgtcgcag gtcgtgagcg accccagcct gaccaagtcc ggcgtgtact 120

ggagctggaa caagaactcg gcgtccttcg agaaccagct ctctgaggag gccagcgacg 180

ccgacaaggc caagaagctc tgggagatca gcgagaagct cgtcagcttg gcgtgacgac 240

ctgatgtcca cagtg 255

<210> 418
<211> 326
<212> nucleic acid
<213> Zea mays

<400> 418

cggacgcgtg ggcggacgcg tggggaagta catcaccaag gggtacgtct ccgaggagga 60

ggccgggaag cggctggcgc aggtggtgag cgaccccagc ctgaccaagt ccggcgtgta 120

ctggagctgg aacaagaact ccgcgtcctt cgagaaccag ctctctgagg aggccagcga 180

cgccgacaag gccaagaagc tctgggagat cagcgagaag ctcgtcggct tggcgtgatg 240

cccaccgtgg ccggcgccgg cagccggcga cagtttttcc tacctaggac atgctcatta 300

gttggtctca gtcgagtagt cgacgt 326

<210> 419
<211> 290
<212> nucleic acid
<213> Zea mays

<400> 419

ctccgaggag gaggccggga agcggctgtc gcaggtcgtg agcgacccca gcaccgacca 60

agtccggcgt gtactggagc tggaacaaga actcggcgtc cttcgagaac cagctctctg 120

aggaggccag cgacgccgac aaggccaaga agctctggga gatcagcgag aagctcgtcg 180

gcttggcgtg acgacctgat gcccaccgtg gccggcgccg gcagccggtg acagtttttt 240

cctaggacat gttcgttact tgatctcagt cgacgcgtgg tgcactcgtg 290

<210> 420
<211> 217
<212> nucleic acid
<213> Zea mays

<400> 420

cccacgcgtc cgctgggcca cttcctcctg gcgcgcctgc tcctggacga catgcagaag 60

tccgactacc cgtcccgccg cctcgtcatc ctcggctcca tcaccggcaa caccaacacg 120

ctggccggga acatcccgcc caaggccggg ctgggcgacc tccgcggcct cgcggcgggg 180

ctgcgcggcc agaacggctc tgccatgatc gacggct 217

<210> 421
<211> 242
<212> nucleic acid
<213> Zea mays

<400> 421

ctccgaggag gaggggaagc ggctggcgca ggtggtgagc gaccccagcc tgaccaagtc 60

cggcgtgtac tggagctgga acaagaactc cgcgtcctac gagaaccagc tctctgagga 120

ggccagcgac gccgacaagg ccaagaagct ctgggagatc agcgagaagc tcgtcggctt 180

ggcgtgatgc ccaccgtggc cggcgccggc agccggcgac agtttttcct acctaggaca 240

tg 242

<210> 422
<211> 116
<212> nucleic acid
<213> Zea mays

<400> 422

tgccggtacc acgaggagac gggcgtgacc ttcgcgtcgc tctacccggg ctgcatcgcc 60

accacgggcc tgttccgcga gcacatcccg ctgttccgcc tgctcttccc gccgtt 116

<210> 423
<211> 133
<212> nucleic acid
<213> Zea mays

<400> 423

tctcgagccg aatctggctc gaggaggaac atcccgccca aggccgacct gggcgacctc 60

cgacgcctcg cggcggggct gcacggccat aacggctctg ccatgatcga cggctccgag 120

agcttcgacg gcg 133

<210> 424
<211> 364
<212> nucleic acid
<213> Zea mays

<400> 424

cgcaagggca cggcggtcat caccggcgcg tcgtccggcc tcggcctcgc cacggcgaag 60

gccctggcgg agacaggcaa gtggcacgtc atcatggcct gccgcgactt cctcaaggcg 120

tcgcgcgcgg ccaaggcggc cggcatggac aaggacagct tcaccgtcgt gcacctggac 180

ctcgcctccc tggacagcgt ccgccagttc gtcaagaacg tgcgccagct ggagatgccc 240

atcgacgtgg tggtctgcaa cgccgtcgtg taccagccca ccgccaagga gccgtcctac 300

accgccgacg gcttcgagat gagcgtcggc gtcaaccaac ctggccactt tctcctcgcg 360

cgcg 364

<210> 425
<211> 289
<212> nucleic acid
<213> Zea mays

<400> 425

cctggacctc gcctccctgg acagcgtccg ccagttcgtc aggaacgtgc gccactgaga 60

gatgcccatc gacgtggtgg tctgcaacgc cgccgtgtac cagcccaccg ccaaggagcc 120

gtcctacacc gccgacggct tcgagatgag cgtcggcgtc aaccacctcg gccacttcct 180

cctcgcgcgc gagctcctca gcgacctcca gtcctccgac taccctcta agcgcctcat 240

catcgtcggc tccatcaccg ggaacacgta cacgctggcg gggaacgtg 289

<210> 426
<211> 331
<212> nucleic acid
<213> Zea mays

<400> 426

atccgcacac gcgtccgcgt catcatgggc tgccgcgatt tccacaaggc gtcgcgcgca 60

gccaaagcag ccggcatgga caaggacagc ttcaccgtcg tgcacctgga cctcgcctcc 120

ctcgacagcg tccgccagtt cgtcaagaac gtgcgccagc tggagatgcc cgtcgacgtg 180

gtggtctgca acgccgccgt gtaccagccc accgccaagg agccgtccta caccgccgac 240

ggcttcgaga tgagcgtcgg cgtcaaacac ctcggccact tcctcctcgc ccgcgagctc 300

ctcagcgacc tccagtcctc cgactatccc t 331

<210> 427
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 427

gtggtggtct gcaacgccgc cgtgtaccag cccaccgcca aggagccgtc ctacaccgcc 60

gacggcttcg agatgagcgt cggcgtcaac cacctcggcc atttcctcct cgcccgcgag 120

ctcctcagcg acctccagtc ctccgactac ccctctaagc gcctcatcat cgtcggctcc 180

atcaccggga acacgaacac gctggcgggg aacgtgcccc cgaactcgaa cctgggcgac 240

ctgcgcggcc tcgccggcgg cctcaacggc gttggcagct 280

<210> 428
<211> 285
<212> nucleic acid
<213> Zea mays

<400> 428

gagcgtcggc gtcaaccacc tcggccattt cctcctcgcc cgcgagctcc tcagcgacct 60

ccagtcctcc gactacccct ctaagcgcct catcatcgtc ggctccatca ccgggaacac 120

gaacacgctg gcggggaacg tgcccccgaa ggcgaacctg ggcgacctgc gcggcctcgc 180

cggcggcctc aacggcgttg gcagctcggt gatgatcgac ggcggggagt tcgacggcgc 240

caaggcatac aaggacagca aggtgtgcaa catgctgacg atgca 285

<210> 429
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 429

cccacgcgtc cgcaccggcg cgtcgtccgg cctcggcctc gccacggcga aggccctcgc 60

ggagacaggc aagtggcacg tcatcatggc ctgccgcgac ttcctcaagg cgtcgcgcgc 120

ggccaaggcg gccggcatgg acaaggacag cttcaccgtc gtgcacctgg acctcgcctc 180

cctggacagc gtccgccagt tcgtcaggaa cgtgcgccag ctggagatgc ccatcgacgt 240

ggtggtctgc aacgccgccg tgtaccagcc caccgccaag ga 282

<210> 430
<211> 276
<212> nucleic acid
<213> Zea mays

<400> 430

cccacgcgtc cggtcaggaa cgtgcgccac tggagatgcc catcgacgtg gtggtctgca 60

acgccgccgt gtaccagccc accgccaagg agccgtccta caccgccgac ggcttcgaga 120

tgagcgtcgg cgtcaaccac ctcggccatt tcctcctcgc ccgcgagctc ctcagcgacc 180

tccagtcctc cgactacccc tctaagcgcc tcatcatcgt cggctccatc accgggaaca 240

cgaacacgct ggcggggaac gtgccccgac agcgaa 276

<210> 431
<211> 229
<212> nucleic acid
<213> Zea mays

<400> 431

ccaaaacctg cagagggtga gcaggtcggc ggacatccgc gcgcagacgg cagcggtgtc 60

ctccccgtca gtgacccccg cgtcgccgtc tggcaagaag accctccgca agggcacggc 120

ggtcatcacc ggcgcgtcgt ccggcctcgg cctcgccacg gcgaaggccc tcgcggagac 180

aggcaagtgg cacgtcatca tggcctgccg cgacttctca aggcgtcgc 229

<210> 432
<211> 394
<212> nucleic acid
<213> Zea mays

<400> 432

aggaagaacc cagccaaatc ctcagtcctc aggctgctcg cagctcgtgc cgtccactct 60

cccccgaggc attctcttgc gttcgctgct cgacatggcg ctccaggcgg cgacgtcctt 120

cctccctct gccctctccg cgcgcaagga ggggtcggtg aaggactcgg cgtcgttctt 180

gggtgttcgt ctcgcggcgg atgggctcaa gctggacacc accgctctgg gcctacgcac 240

cgtgagggtg agcaggtcgg cggacatccg cgcgcagacg gcagcggtgt cctccccgtc 300

agtgacccct gcgtcgccgt ctggcaagaa gaccctccgc attggcacgg cggtcatcat 360

cggcgcgtcg tccggcctcg gcctcgccac ggcg 394

<210> 433
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 433

gttcgtctcg cggcggatgg cctcaagctg gacaccaccg ctctgggcct acgcaccgtg 60

agggtgagca ggtcggcgga catccgcgcg cagacggcag cggtgtcctc cccgtcagtg 120

acccccgcgt cgccgtctgg caagaagacc ctccgcaagg gcacggcggt catcaccggc 180

gcgtcgtccg gcctcggcct cgccacggcg aaggccctcg cggagacagg caagtggcac 240

gtcatcatgg cctgccgcga cttcctcaag gcgtc 275

<210> 434
<211> 418
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (303),(315),(336),(347),(353),(356),(366),(378),(380),
(387),(389),(394)...(396),(398)...(399),(404),(411),
(415),(417)
<223> unsure at all n locations

<400> 434

agaggaagaa gaagaaccca gccaaatcct cagtcttcag gctgctcaca gctcgtgccg 60

tccactctcc cccgaggcag tctcttgcgt tcgctgctcg acatggcgct ccaggcggcg 120

acgtcctttc tcccctcggc cctctccgcg cgcaaggagg ggtcggtgaa ggactcggcg 180

tcgttcttgg gtgttcgtct cgcggcggat ggcctcaagc tggacaccac cgctctgggc 240

ctacgcaccg tgagggtgag caggtcggcg gacatccgcg cgcagacggc agcggtgtcc 300

tcnccgtcag tgacncccgc gtccccgtct ggcaanaaga cctccgnaag ggnaanggcg 360

gtcatnaacg gggggctngn tagggcncng gggnnncnna gggngaaggg ngccncnt 418

<210> 435
<211> 321
<212> nucleic acid

<213> Zea mays

<400> 435

agccaaatcc tcagtcttca ggctgctcac agctcgtgcc gtccactctc ccccgaggca 60

gtctcttgcg ttcgctgctc gacatggcgc tccaggcggc gacgtccttt ctcccctcgg 120

ccctctccgc gcgcaaggag gggtcggtga aggactcggc gtcgttcttg ggtgttcgtc 180

tcgcggcgga tggcctcaag ctggacacca ccgctctggg cctacgcacc gtgagggtga 240

gcaggtcggc ggacatccgc gcgcagacgg cagcggtgtc ctccccgtca gtgaccccgc 300

gatcgcgtct ggcaagaaga c 321

<210> 436
<211> 112
<212> nucleic acid
<213> Zea mays

<400> 436

ctcgcccgcg agctcctcag cgacctccag tcctccgact actcctctaa gcgcctcatc 60

atcgtcagct ccatcaccgg gaacacgaac acgctggcgg ggaacgtgcc cc 112

<210> 437
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 437

gactagttct agatcccccc gcggagcaga gaggaagaag aagaacccag ccaaatcctc 60

agtcttcagg ctgctcacag ctcgtgccgt ccactctccc ccgaggcagt ctcttgcgtt 120

cgctgctcga catggcgctc caggcggcga cgtcctttct cccctcggcc ctctccgcgc 180

gcaaggaggg gtcggtgaag gactcggcgt cgttcttggg tgttcgtctc gcggcggatg 240

gcctcaagct ggacaccacc gctctgggcc tacgcaccgt gagggtgagc aggtcg 296

<210> 438
<211> 175
<212> nucleic acid
<213> Zea mays

<400> 438

cgacatggcg ctccaggcgg cgacgtcctt tctcccctcg gccctctccg cgcgcaagga 60

ggggtcggtg aaggactcgg cgtcgttctt gggtgttcgt ctcgcggcgg atggcctcaa 120

gctggacacc accgctctgg gcctacgcac cgtggaggtg agcaggtcag cggac 175

<210> 439
<211> 301
<212> nucleic acid
<213> Zea mays

<400> 439

agaagaaccc agccaaatcc tcagtcctca ggctgctcac agctcgtgcc gtccactctc 60

ccccgagcca gtctcttgcg ttcgctgctc gacatggcgc tccaggcggc gacgtccttc 120

ctcccctctg ccctctccgc gcgcaaggag gggtcggtga aggactcggc gtcgttcttg 180

ggtgttcgtc tcgcggcgga tggcctcaag ctggacacca ccgctctggg cctacgcacc 240

gtgagggtga gcaggtcggc ggacatccgc gcgcagacgg cagcggtgtc ctccccgtca 300

g 301

<210> 440
<211> 261
<212> nucleic acid
<213> Zea mays

<400> 440

gtgaaggact cggcgtcgtt cttgggtgtt cgtctcgcgg cggatggcct caagctggac 60

accaccgctc tgggcctacg caccgtgagg gtgagcaggt cggcggacat ccgcgcgcag 120

acggcagcgg tgtcctcccc gtcagtgacc cccgcgtcgc cgtctggcaa gaagaccctc 180

cgcataggca cggcggtcat caccggcgcg tcgtccggcc tcggcctcgg cacggcgaag 240

gccctcgcgg agacaggcaa g 261

<210> 441
<211> 84
<212> nucleic acid
<213> Zea mays

<400> 441

gtccggcctc ggcctcgcca cggcgaaggc cctcgcggag acaggcaagt ggcacgtcat 60

catggcctgc cgcgacttcc tcaa 84

<210> 442
<211> 352
<212> nucleic acid
<213> Zea mays

<400> 442

cggacgcgtg ggctgtcggt gagatcgctt gtggcgacga cggcgcctgt ggccacgccg 60

gggtccagca cggcggccaa ggatgggaag aagaccgtgc ggcagggcgt ggtggtgatc 120

acgggcgcgt cgtcggggtt gggcctggcg gcggccaagg cgctggcgga gaccggcaag 180

tggcacgtgg tgatggcctg ccgcgacttc ctcaaggcgg ccaaggcggc caagggcgcc 240

ggcatggcgg acggcagcta caccatcatg cacctggacc tggccttcct cgacagcgtg 300

cggcagttcg tggacagctt ccggcgcgcc ggcatgccgc tcgactcgct cg 352

<210> 443
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 443

acgggcgcgt cgtcggggtt gggcctggcg gcggccaagg cgctggcgga gaccggcaag 60

tggcacgtgg tgatggcctg ccgcgacttc ctcaaggcgg ccaaggcggc caagggcgcc 120

ggcatggcgg acggcagcta caccatcatg cacctggacc tggcctccct cgacagcgtg 180

cggcagttcg tggacagctt ccggcgcgcc ggcatgccgc tcgactcgct cgtctgcaac 240

gccgccatct accggcccac ggcatagacg ccgacgttc 279

<210> 444
<211> 221
<212> nucleic acid
<213> Zea mays

<400> 444

aaagcgcatc gatctcgctg tcgtcactcc tcgtcaccca gccaaggcgc tggcggagac 60

cggcaagtgg cacgtggtga tggcctgccg cgacttcctc aaggcggcca aggcggccaa 120

gggcgccggc atggcggacg gcagctacac catcatgcac ctggacctgg cctccctcga 180

cagcgtgcgg cagttcgtgg acagcttccg gcgcgccggc a 221

<210> 445
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 445

agtgcagcct cgccgtcgcg gcgaaggaca cggcattcct tagcgtatcc cagaagaagg 60

tgcaggcggc gtcgctgtcg gtgagaacgc gggtggcgac gacggcgcct gtggccacgc 120

cggggtccag cacggcggcc aaggatggga agaagaccgt gcggcagggc gtggtggtga 180

tcacgggcgc gtcgtcgggg ttgggcctgg cggcggccaa ggcgctggcg gagaccggca 240

agtggcacgt ggtgatggcc tgccgcgact tcctcaaggc ggccaatgcg gccaagggcg 300

ccggcatggc 310

<210> 446
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 446

cccacgcgtc cgcggcgaag gacacggcat tccttagcgt atcccagaag aaggtgcagg 60

cggcgtcgct gtcggtgaga acgcgggtgg cgacgacggc gcctgtcgcc acgccggggt 120

ccagcacggc ggccaaggat gggaagaaga ccgtgcggca gggcgtggtg gtgatcacgg 180

gcgcgtcgtc ggggttgggc ctggcggcgg ccaaggcgct ggcggagacc ggcaagtggc 240

acgtggtgat ggcctgccgc gacttcctca aggcggccaa ggcggccaag ggcgc 295

<210> 447
<211> 444
<212> nucleic acid
<213> Zea mays

<400> 447

cggacgcgtg ggcgaacaaa agcgcatcga tctcgctgtc gtcactcctc gtcacccagg 60

cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gctcctctca tccaccctct 120

catccgtccc caagaagtgc agcctcgccg tcgcggcgaa ggacacggca ttccttagcg 180

US 2009/0265806 A1

tatcccagaa ggtcagtgat cagctgcatc tgcatgctgc actcgcagtc acaatgcgct 240

tgaattgaac gtgtcactca ctctgtcgtg agcatgccat gcgtgcagaa ggtgcaggcg 300

gcgtcgctgt cggtgagagt cacttcgcca tctaccggcc cacggcaagg acgccgacgt 360

tcacggcgga cggatacgag atgagcgtcg gcgtcaacca cctgggccac ttcctcctgg 420

cgcgcctgct cctggacgac atgc 444

<210> 448
<211> 423
<212> nucleic acid
<213> Zea mays

<400> 448

cccacgcgtc cgcccacgcg tccgcggact cgtgggcttc gccacgaaca aaagcgcatc 60

gatctcgctg tcgtcactcc tcgtcaccca gccacgaaca gaggcaccac ccagcatggc 120

cctgcaggcg gcgctcctcc catccaccct ctcatccgtc cccaagaagt gcagcctcgc 180

cgtcgcggcg aaggacacgg cattccttag cgtatcccag aagaaggtgc aggcggcgtc 240

gctgtcggtg agaacgcggg tggcgacgac ggcgcctgtg gccacgccgg ggtccagcac 300

ggcggccaag gatgggaaga agaccgtgcg gcagggcgtg gtggtgatca cgggcgcgtc 360

gtcggggttg ggcctggcgg cggccaaggc gctggcggag accggcaagt ggcacgtggt 420

gat 423

<210> 449
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 449

cgctgtcgtc actcctcgtc acccagccac gaacagaggc accacccagc atggccctgc 60

aggcggcgct cctcccatcc accctctcat ccgtccccaa gaagtgcagc ctcgccgtcg 120

cggcgaagga cacggcattc cttagcgtat cccacggcgc ggacgccgac gttcacggcg 180

gacgggtacg agatgagcgt cggcgtcaac cacctgggcc acttcctcct ggcgcgcctg 240

ctcctggacg acatgcagaa gtccgactac acgtcccgc 279

<210> 450

<211> 396
<212> nucleic acid
<213> Zea mays

<400> 450

gacttcgcca cgaacaaaag cgcatcgatc tcgctgtcgt cactcctcgt cacccagcca 60

cgaacagagg caccacccag catggccctg caggcggcgc tcctcccatc caccctctca 120

tccgtcccca agaagtgcag cctcgccgtc gcggcgaagg acacggcatt ccttagcgta 180

tcccagaaga aggtgcaggc ggcgtcgctg tcggtgagaa cgcgggtggc gacgacggcg 240

cctgtggcca cgccggggtc agcacggcg gccaaggatg ggaagaagac cgtgcggcag 300

ggcgtggtgg tgatcacggg cgcgtcgtcg gggttgggcc tggcggcggc caaggcgctg 360

gcggagaccg gcaagtggca cgtggtgatg gcctgc 396

<210> 451
<211> 375
<212> nucleic acid
<213> Zea mays

<400> 451

cagagtcact tcgccacgaa caaatgcgca tcgatctcgc tgtcgtcact cctcgtcacc 60

cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120

ctctcatccg tccccaagaa gtgcagcctc gccgtcgcgg cgaaggacac ggcattcctt 180

agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240

acggcgcctg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300

cggcagggcg tggtggtgat cacgggcgcg tcgtcggggt tgggcctggc ggcggccaag 360

gcgctggcgg agacc 375

<210> 452
<211> 326
<212> nucleic acid
<213> Zea mays

<400> 452

aacaaaagcg catcgatctc gctgtcgtca ctcctcgtca cccagccacg aacagaggca 60

ccacccagca tggccctgca ggcggcgctc ctcccatcca ccctctcatc cgtccccaag 120

aagtgcagcc tcgccgtcgc ggcgaaggat caggcattcc ttagcgtatc ccagaagaag 180

gtgcaggcgg cgtcgctgtc ggtgagaacg cgggttgcga cgacggcgcc tgttgccacg 240

ccggggtcca gcacggcggc caaggatggg aagaagaccg tgcggcaagg cgtggtggtg 300

atcacgggcg cgtcgtcggg gttggg 326

<210> 453
<211> 338
<212> nucleic acid
<213> Zea mays

<400> 453

gagtcacttc gccacgaaca aaagcgcatc gatctcgctg tcgtcactcc tcgtcaccca 60

gccacgaaca gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccacccct 120

ctcatccgtc cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag 180

cgtatcccag aagaaggtgc aggcggcgtc gctgtcggtg agaacgcggg tggcgacgac 240

ggcgcctgtg gccacgccgg ggtccagcac ggcggccaag gatgggaaga agaccgtgcg 300

gcagggcgtg gtggtgatca ctggcgcgtc gtcggggt 338

<210> 454
<211> 273
<212> nucleic acid
<213> Zea mays

<400> 454

cttcgccacg aacaaaagcg catcgatctc gctgtcgtca ctcctcgtca cccagccacg 60

aacagaggca ccacccagca tggccctgca ggcggcgctc ctcccatcca ccctctcatc 120

cgtccccaag aagtgcagcc tcgccgtcgc ggcgaaggac acggcattcc ttagcgtatc 180

ccagaagaag gtgcaggcgg cgtcgctgtc ggtgagaacg cgggtggcga cgacggcgcc 240

tgtggccacg ccggggtcca gcacggcggc caa 273

<210> 455
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 455

gccacgaaca aaagcgcatc gatctcgctg tcgtcactcc tcgtcaccca gccacgaaca 60

gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccaccct ctcatccgtc 120

cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag cgtatcccag 180

aagaaggtgc aggcggcgtc gctgtcggtg agaacgcggg tggcgacgac ggcgcctgtg 240

gccacgccgg ggtccagcac ggcggccaag gatgggaaga agaccgtgcg gcaggg 296

<210> 456
<211> 314
<212> nucleic acid
<213> Zea mays

<400> 456

cagagtcagt tcgccacgaa caaaagcgcg tcgatgtcgc tgtcgtcact cgtcgtcacc 60

cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgggtcg tcggatccac 120

gctgtcatcc gtccccgaga agtgcagcct cgccgtcgcg gcgaaggtca cggcattcct 180

tagcgtatcc cagaagaagg tgcaggcggc gtcggtgtcg gtgagaacgc gggtggcgac 240

gacggcgcct gtggccacgc cggggtccag cacagcggcc aaggatggga agaagaccgt 300

gcggcagggc gtgg 314

<210> 457
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 457

gagtcacttc gccacgaaca aaagcgcatc gatctcgctg tcgtcactcc tcgtcaccca 60

gccacgaaca gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccaccct 120

ctcatccgtc cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag 180

cgtatcccag aagaaggtgc aggcggcgtc gctgtcggtg agaacgcggg tggcgacgac 240

ggcgcctgtg gccacgccgg ggtccagcac ggcggccaag gatggga 287

<210> 458
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 458

cagagtcact tcgccacgaa caaaagcgca tcgatctcgc tgtcgtcact cctcgtcacc 60

cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120

ctctcatccg tccccaagaa gtgcagcctc gccgtcgcgg cgaaggacac ggcattcctt 180

agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240

acggcgcctg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300

cggcagggcg tg 312

<210> 459
<211> 321
<212> nucleic acid
<213> Zea mays

<400> 459

gtcacttcgc cacgaacaaa agcgcatcga tctcgctgtc gtcactcctc gtcacccagc 60

cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gctcctccca tccaccctct 120

catccgtccc caagaagtgc agcctcgccg tcgcggcgaa ggacacggca ttccttagcg 180

tatcccagaa gaaggtgcag gcggcgtcgc tgtcggtgag aacgcgggtg gcgacgacgg 240

cgcctgtggc cacgccgggg tccagcacgg cggccaagga tgggaagaag accgtgcggc 300

agggcgtggt ggtgatcacg g 321

<210> 460
<211> 281
<212> nucleic acid
<213> Zea mays

<400> 460

cttcgccacg aacaaaagcg cgtcgatctc gctgtcgtca ctcctcgtca cccagccacg 60

aacagaggca ccacccagca tggccctgca ggcggcgctc ctcccatcca ccctctcatc 120

cgtccccaag aagtgcagcc tcgccgtcgc ggcgaaggac acggcattcc ttagcgtatc 180

ccagaagaag gtgcaggcgg cgtcgctgtc ggtgagaacg cgggtggcga cgacggcgcc 240

tgtggccacg ccggggtcca gcaggcggcc aaggatggga a 281

<210> 461

<211> 314
<212> nucleic acid
<213> Zea mays

<400> 461

cagagtcact tcgccacgaa caaaagcgca tcgatctcgc tgtcgtcact cctcgtcacc 60

cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120

ctctcatccg tccccaagaa gtgcagcctc gccgtcgcgg cgaaggacac ggcattcctt 180

agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240

acggcgcctg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300

cggcatggcg tggt 314

<210> 462
<211> 351
<212> nucleic acid
<213> Zea mays

<400> 462

gtccggcaag atgctggcgc aggtggtcag cgaccccagc ctcaccaagt cgggggtgta 60

ctggagctgg aacaaggact cggcgtcgtt cgagaaccag ctgtcgcagg aggccagcga 120

tccggagaag gccaagaagc tctgggagat cagcgagaag ctcgtggggc ttgcctgagc 180

tcgccggcac ggcacagcga catgatggat ctgtcgagca gaggagcttt cgcttcgttg 240

tattatgtgt accattagca tccattttgt ttgtttctag aagttggtaa tgaccgtcgg 300

agaagagcct gtaattgttc gatcatgtat tgcttacaat ttttttttaa a 351

<210> 463
<211> 327
<212> nucleic acid
<213> Zea mays

<400> 463

gtccggcaag atgctggcgc aggtggtcag cgaccccagc ctcaccaagt cgggggtgta 60

ctggagctgg aacaaggact cggcgtcgtt cgagaaccag ctgtcgcagg aggccagcga 120

tccggagaag gccaagaagc tctgggagat cagcgagaag ctcgtggggc ttgcctgagc 180

tcgccggcac gcgacagcga catgatggat ctgtcgagca gaggagcttt cgcttcgttg 240

tattatgtgt accattagca tccattttgt ttgtttctag aagttggtaa tgaccgtcgg 300

agaagagcct gtaattgttc gatcatg 327

<210> 464
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 464

ggcctgccgc gacttcctca aggcggccaa ggcggccaag ggcgccggca tggcggacgg 60

cagctacacc atcatgcacc tggacctggc ctccttcgac agcgtgcggc agttcgtgga 120

cagcttccgg cgcgccggca tgccgctcga ctcgctcgtc tgcaacgccg ccatctaccg 180

gcccacggcg cggacgccga cgttcacggc ggacgggtac gagatgagcg tcggcgtcaa 240

ccacctgggc cacttcctcc tggcgcgcct gctcctggac gacatgcaga agtccgacta 300

cccg 304

<210> 465
<211> 285
<212> nucleic acid
<213> Zea mays

<400> 465

cggcatggcg gacggcagct acaccatcat gcacctggac ctggcctccc tcgacagcgt 60

gcggcagttc gtggacagct tccggcgcgc cggcatgccg ctcgactcgc tcgtctgcaa 120

cgccgccatc taccggccca cggcgcggac gccgacgttc acggcggacg ggtacgagat 180

gagcgtcggc gtcaaccacc tgggccactt cgtcctggcg cgcctgctcc tggacgacat 240

gcagaagtcc gactactcgt cccgccgcct cgtcatcctc ggctc 285

<210> 466
<211> 147
<212> nucleic acid
<213> Zea mays

<400> 466

cccacgcgtc cgcacacgcg tccggtggac agcttccggc gcgccggcat gccgctcgac 60

tcgctcgtct gcaacgccgc catctaccgg cccacggcgc ggacgccgac gttcacggcg 120

gacgggtacg agatgagcgt ccgcgtc 147

<210> 467
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 467

actaaatgcc gaggtgatgg aacttgacct gctctccctc gactcggtcg taaaatttgc 60

tgatgcttgg acagctcgta tggcaccgct gcacgtgttg atcaacaatg ctgagctctt 120

cgctatagga gaaccccaac atttttccaa ggatggacat gaagaacaca tgcaagtgaa 180

ccatcttgca cctgcattac tggcgatgct gcttatacct tcccttctcc gaggttctcc 240

cagcagaatt gtaaacgtta attcaatcat gcacagtgta 280

<210> 468
<211> 277
<212> nucleic acid
<213> Zea mays

<400> 468

ctcaaatagc aagctggcac aggtaaaatt cagtagcatg cttcacaaga aaattcctgc 60

agaggctggc atcggtgtag tttgcgcttc tcctggaatt gtcgacacga acgttgcaag 120

agctcttcct aagattgtcg tagccgcgta ccatttgatt ccctacttca tatttgacgc 180

tcaagaaggt tctaggagtg cactgtttgc agcatccgat ccccaagtcc cggaatactg 240

cgagacgctc aagtcggagg actggccagt ttgtgcc 277

<210> 469
<211> 436
<212> nucleic acid
<213> Zea mays

<400> 469

ggttctccca gcagaattgt taacgttaat tcaatcatgc acagtgtagg ttttgttgat 60

gctgaagatt tgaacttgag aaaacataaa tatagaagtt ggttggcgta ttcaaatagc 120

aagttggcac aggtaaaatt tagtagcatg cttcataaga gaattcctgc agaagctggc 180

atcagcataa tttgtgcttc tcctggaatt gtcgacacga atgttacaag agaccttcct 240

aagattgttg tagctgcata ccatttttctt ccctacttca tattcgatgg tcaagaaggt 300

tctaggagtg cactgtttgc agcatgtgac ccccaagttc cagagtactg tgagatgctc 360

aagtcggaag actggccagt ctgtgcttgc attaactacg actgtaatcc gatgaacgcg 420

tctgaagaag cgcaca 436

<210> 470
<211> 335
<212> nucleic acid
<213> Zea mays

<400> 470

gtagaattta gtagcatgct tcataagata attcctgcag aagctggcat cagcataatt 60

tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120

gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgca 180

ctgtttgcag catgtgaccc ccaagttcca gagtactgtt gagatgctca agtcggaaga 240

ctggccagtc tgtgcttgca ttaactacga ctgtaatccg atgaacgcgt ctgaagaagc 300

gcacagcttg ataccttcgc agctggtctg ggaga 335

<210> 471
<211> 343
<212> nucleic acid
<213> Zea mays

<400> 471

gtaaaatgta gtagcatgct tcataagaga attcctgcag aagctggcat cagcataatt 60

tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120

gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgca 180

ctgtttgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggtagac 240

tggccagtct gtgcttgcat taactacgac tgtaatccga tgaacgcgtc tgaagaagcg 300

cacagccttg aaacctcgca gctggtctgg gagaagcgct cga 343

<210> 472
<211> 262
<212> nucleic acid
<213> Zea mays

<400> 472

gtaaaattta gtagcatgct tcataagata attcctgcag aagctggcat cagcataatt 60

tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120

gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgca 180

ctgtttgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggaagac 240

tggccagtct gtgcttgcat ta 262

<210> 473
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 473

gcttcataag agaattcctg cagaagctgg catcagcata atttgtgctt ctcctggaat 60

tgtcgacacg aatgttacaa gagaccttcc taagattgtt gtagctgcat accgttttct 120

tccctacttc atattcgatg gtcaagaagg ttctaggagt gcactgtttg cggcatgtga 180

cccccaagtt ccagagtact gtgagatgct caagtcggaa gactggccag tctgtgcttg 240

cattaactac gactgt 256

<210> 474
<211> 208
<212> nucleic acid
<213> Zea mays

<400> 474

gcttcataag agaattcctg cagaagctgg catcagcata atttgtgctt ctcctggaat 60

tgtcgacacg aatgttacaa gagaccttcc taagattgtt gtagctgcat accgttttct 120

tccctacttc atattcgatg gtcaagaagg ttctaggagt gcactgtttg cggcatgtga 180

cccccaagtt ccagagtact gtgagatg 208

<210> 475
<211> 338
<212> nucleic acid
<213> Zea mays

<400> 475

gtatgattta gtagcatgct gcataagaga gttcctgcag aagctggcat cagcataatt 60

tgtgcttctc ctggaattct cgacacgaat gttacgagaa tccttcctaa gattgttgta 120

gctgcatacc gttgtcttcc ctacttcata ttcgatggtc aacaaggttc taggagtgca 180

ctgtctgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggaagac 240

tggccagtct gtgcttgcat taactacgac tgtaatccga tgaacgcgtc tgaagaagcg 300

cacagccttg aaacctcgca gctggtctgg gagaagac 338

<210> 476
<211> 248
<212> nucleic acid
<213> Zea mays

<400> 476

gattgatgct gaagatttca acttgagaaa acataaatat agaagttggt tggcgtattc 60

aaatagcaag ttggcacagg taaaatttag tagcatgctt cataagagaa ttcctgcaga 120

agctggcatc agcataattt gtgcttctcc tggaattgtc gacacgaatg ttacaagaga 180

ccttcctaag attgttgtag ctgcatacgg tttcccccaa atcaaaatcg atggtcaaga 240

aggttcta 248

<210> 477
<211> 341
<212> nucleic acid
<213> Zea mays

<400> 477

gagatcttcc taagattgtc gtagccgcgt accatttgat tccctacttc atatttgacg 60

ctcaagaagg ttctaggagt gcactgtttg cagcatccga tccccaagtc ccggagtact 120

gcgagacgct caagtcggag gactggccag tttgtgcctg cattaactat gactgtagtc 180

cgatgaatgc gtctgaagaa gcgcacaatc tggagacctc gcagctggtc tgggagaaga 240

cactggagat ggtcggcctt ccgccggatg ccctggagaa gctcatcgcc ggagaatcag 300

ttcagtgccg ttacggacaa caggatacaa cttaactttt t 341

<210> 478
<211> 383
<212> nucleic acid

<213> Zea mays

<400> 478

gtgcactgtt tgcagcatcc gatccccaag tcccggaata ctgcgagacg ctcaagtcgg 60

aggactggcc agggggtgcc tgcattaact atgactgtag tccgatgaat gcgtctgaag 120

aagcgcacaa tcttgagacc tcgcagctgg tctgggagaa gacactggag atggtcggcc 180

ttccgccgga tgccctggag aagctcatcg ccggagaatc agttcagtgc cgttacggac 240

aacaggatac aacttttag ttagcagttt agaggtggtt tgttcggttg ttatgtcatt 300

ttgatcctaa atttgcaggg aggaaaacac agggaaagga gaaaaagaat ttgttgacag 360

ctacccaatc ttggctcttt tct 383

<210> 479
<211> 166
<212> nucleic acid
<213> Zea mays

<400> 479

ggaggactgg ccatttttgtg cctgcatgaa ctatgactgt agtccgatga atgcgtctta 60

caggagcgca caatcttgag acctcgcagc tggtctggga gaagacactg gagatggtcg 120

gcgttccgcc ggatgccctg gagaagctca tcgccggaga atcagt 166

<210> 480
<211> 382
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (11),(32),(34)
<223> unsure at all n locations

<400> 480

agtgaggagt ngcttccaaa actgatgcat gnantcatgc aatacgcatt ccggtcgacc 60

actcgtaccc tggtaaaccc gaaggattgg atctgattat ccgctattct tgtgtccctt 120

acgcttggag cacgatggca gtatgatcat aaaccggatg aaggaaccgc cgaacggaaa 180

cttctataag cctgcataaa cccgatagat tggatctgat tatcccttat tcttgagatc 240

tttagttaga gttttccctt ctgtagggct aaaaccacgt gcagcttcat gatatatcct 300

gcctctgtac aatcgtgaac aaatattacg tattaatgct ctatctgcct gtattatata 360

tgctgctttt tgcccatgtg aa 382

<210> 481
<211> 358
<212> nucleic acid
<213> Zea mays

<400> 481

cctgcataaa cccgaaggat tggatctgat tagccgttat tcttgtgtcc cttccgcttg 60

cagcacgatg gcagtatgat cataaaccgg aagaaggaac cgaggaatgg aaacttctgg 120

aagcctgcat aaacccgaag gattggatct gattagccgt tattcttgag atcttttgtt 180

agagttttcc cttctgtagg gctaagacca cgtgcagttt cattatatat tttgcatctg 240

tagaatcgtg aataaatatg atgtagtaat gctgtagctg tctgtatcta tctgctgttt 300

tttccccatg tgaatgagag aaccattggc ttctgtatta cgaaggattc aggtttct 358

<210> 482
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 482

accggaagaa ggaaccgagg aatggaaact tctggaagcc tgcataaacc cgaaggattg 60

gatctgatta gccgtcattc ttgagatctt ttgttagagt tttcccttct gtagggctaa 120

gaccacgtgc agtttcatta tttctttttg catctgtaga atcgtgaata aatatgatgt 180

agtaatgctg tagctgtttg tatctatctg ctgtttttc cccatgtgaa tgagtgaacc 240

attggcttct gtatttacga aggattcagg tttct 275

<210> 483
<211> 335
<212> nucleic acid
<213> Zea mays

<400> 483

cttgaagagg acgtgaagca tttccattct gttcaaaagc aagcatgtga taaatttgat 60

ccaagttttc acccaagatt caaaaaatgg tgtgatgatt atttctatat taagcaccgt 120

aatgagcggc gtgggctagg tggaatattt tttgatgacc ttaatgatta cgatcaagaa 180

atgcttctca actttgctac agaatgtgcg gactctgtac ttcctgcgta cataccgatc 240

atagaacggc ggaagaacac tccgttcaat gaggagcaca gggcatggca gcaattgcgg 300

agaggtcgtt atgtggagtt caaccttgtc tacga 335

<210> 484
<211> 475
<212> nucleic acid
<213> Zea mays

<400> 484

caagaaatgc ttctcaactt tgctacagaa tgtgcggact ctgtacttcc tgcgtacata 60

ccgatcatag aacggaggaa gaacactccg ttcaacgagg agcacagggc atggcagcaa 120

ttgcggagag gtcgttatgt ggagttcaac cttgtctacg accgtggtac aacatttggc 180

ctaaagactg gaggaaggat tgagagcata cttgtgtccc ttccacttac agcacgatgg 240

cagtatgatc ataaaccgga agaaggaacc gaggaatgga aacttctgga agcctgcata 300

aacccgaagg attggatctg attagccgtt attcttgaga tcttttgtta gaagtttccc 360

ttctgtaggg ctaagaccac gtgcagtttc attatatatt ttgcatctgt agaatcgtga 420

ataaatatga tgtagtgatg ttgtagctgt ttggatctat ctgctggttt ttccc 475

<210> 485
<211> 329
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (221),(256),(283)
<223> unsure at all n locations

<400> 485

atcaagaaat gcttctcaac tttgctacag aatgtgcgga ctctgtactt cctgcgtaca 60

taccgatcat agaacggagg aagaacactc cgttcaacga ggagcacagg gcatggcagc 120

aattgcggag aggtcgttat gtggagttca accttgtcta cgaccgtggt acaacatttg 180

gcctaaagac tggaggaagg attgagagca tacttgtgtc ncttccactt acagcacgat 240

ggcagtatga tcatanaccg gaagaaggaa ccgacgaatg ganacttctg gaagcctgca 300

tagacccgaa ggattggatc tgattagcg 329

<210> 486
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 486

caagattcaa aatatggtgt gatgattatt tctatattaa gcaccgtaat gagcggcgtg 60

ggctaggtgg aatatttttt gatgacctta atgattacga tcaagaaatg cttctcaact 120

ttgctacaga atgtgcggac tctgtacttc ctgcgtacat accgatcata gaacggagga 180

agaacactcc gttcaacgag gagcacaggg catggcagca attgcggaga ggtcgttatg 240

tggagttcaa ccttgtctac gaccgtggta 270

<210> 487
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 487

cgcggcgtgg gctaggtgga atatttttg atgaccttaa tgattacgat caagaaatgc 60

ttctcaactt tgctacagaa tgtgcggact ctgtacttcc tgcgtacata ccgatcatag 120

aacggaggaa gaacactccg ttcaacgagg agcacagggc atggcagcaa ttgcggagag 180

gtcgttatgt ggagttcaac cttgtctacg accgtggtac aacatttggc ctaaagactg 240

gaggacggat tgacag 256

<210> 488
<211> 247
<212> nucleic acid
<213> Zea mays

<400> 488

cttaatgatt acgatcaaga aatgcttctc aactttgcta cagaatgtgc ggactctgta 60

cttcctgcgt acataccgat catagaacgg cggaagaaca ctccgttcaa tgaggagcac 120

agggcatggc agcaattgcg gagaggtcgt tatgtggagt tcaaccttgt ctacgaccgt 180

ggtaccacat ttggcctaaa gactggagga aggattgaga gcatacttgt gtcccttccg 240

cttacag 247

<210> 489
<211> 236
<212> nucleic acid
<213> Zea mays

<400> 489

cccacgcgtc cgctccgttc aatgaggagc acagggcatg gcagcaattg cggagaggtc 60

gttatgtgga gttcaacctt gtctacgacc gtggtaccac atttggccta aagactggag 120

gaaggattga gagcatactt gtgtcccttc cgcttacagc acgatggcag tatgatcata 180

aaccggaaga aggaaccgag gaatggaaac ttctggaagc ctgcataaac ccgaag 236

<210> 490
<211> 430
<212> nucleic acid
<213> Zea mays

<400> 490

gggggaggcc gccaagaacg gggccgccgc cgcggatggc cacaagcctg ggccggtggc 60

attcttcgcc gcggggatta gttcggtgct tcaccccaag aacccatttg ctccaacatt 120

gcattttaac taccgttact ttgagacgga tgcaccaaaa gatgcacctg gtgcaccaag 180

acaatggtgg ttcggcggtg gtactgactt gactccttca tatatcattg aagaggatgt 240

gaagcatttc cattctgttc aaaagcaagc atgtgataaa tttgatccaa gttttcaccc 300

aagattcaaa aaatggtgtg atgattattt ctatattaag caccgtaatg agcggcgtgg 360

gctaggtgga atatttttg atgaccttaa tgattacgat caagaaatgc ttctcaactt 420

tgctacagaa 430

<210> 491
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 491

gggccgccgc cgcggatggc cacaagcctg gccccgtgcc attcttcgcc gcggggatta 60

gttcggtgct tcaccccaag aacccatttg ctccaacatt gcattttaac taccgttact 120

ttgagacgga tgcaccaaaa gatgcacctg gtgcaccaag acaatggtgg ttcggcggtg 180

gtactgactt gactccttca tacatcattg aagaggacgt gaagcatttc cattctgttc 240

aaaagcaagc atgtgataaa tttgatccaa gttttcaccc aagattcaaa aaatggtgtg 300

atga 304

<210> 492
<211> 307
<212> nucleic acid
<213> Zea mays

<400> 492

ggaggccgcc aagaacgggg ccgccgccgc ggatggccac aagcctggcc ccgtgccatt 60

cttcgccgcg gggattagtt cggtgcttca ccccaagaac ccatttgctc caacattgca 120

ttttaactac cgttactttg agacggatgc accaaaagat gcacctggtg caccaagaca 180

atggtggttc ggcggtggta ctgacttgac tccttcatac atcattgaag aggacgtgaa 240

gcatttccat tctgttcaaa agcaagcatg tgataaattt gatccaagtt ttcacccaag 300

attcaaa 307

<210> 493
<211> 173
<212> nucleic acid
<213> Zea mays

<400> 493

gcacgagaaa agatgcacct ggtgcaccaa gacaatggtg gttcggcggt ggtactgact 60

tgactccttc atacatcatt gaagaggacg tgaagcattt ccattctgtt caaaagcaag 120

catgtgataa atttgatcca agttttcacc caagattcaa aaaatggtgt gat 173

<210> 494
<211> 118
<212> nucleic acid
<213> Zea mays

<400> 494

gttactttga gacggatgca ccaaaagatg cacctggtgc accaagacaa tggtggttcg 60

gcggaggtac tgacttgact ccttcataca tcattgaaga ggacgtgaag catatcca 118

<210> 495
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 495

agaagccgca aaaactgccc tggaccgagg tggctacgat gggctgttcc taggagggaa 60

ctatgttgca ggagttgacc tgggcagatg cgttgagggc gcgtatgaaa gtgcctcgca 120

aatatctgac ttcttgacca agtatgccta caagtgatga aagaagtgga gcgctacttg 180

ttaattgttt atgttgcata gatgaggtgc ctacgggaaa aaaaagcttt aatagtattt 240

tttattctta ttttgtaaat tgcatttctg ttcttttttc tgtcattaat tacttatatt 300

ttag 304

<210> 496
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 496

gagggaacta tgttgcagga gttgccctgg gcagatgcgt tgagggcgcg tatgaaagtg 60

cctcgcaaat atctgacttc ttgaccaagt atgcctacaa gtgatgaaag aagtggagcg 120

ctacttgtta atcgtttatg ttgcatagat gaggtgcctc cggggaaaaa aagcttgaat 180

agtatttttt attcttattt tgtaaattgc atttctgttc tttttctat cagtaattag 240

ttatatttta gttctgtagg agattgttct gttcactgcc cttcaaaaga atttt 295

<210> 497
<211> 305
<212> nucleic acid
<213> Zea mays

<400> 497

cgttcttcga tctcatgagc atcccaggga agctcagggc cggtctaggc gcgcttggca 60

tccgcccgcc tcctccaggc cgcgaagagt cagtggagga gttcgtgcgc cgaacttcgt 120

gctgaggtct tcgagcgcct cattgagcct ttctgctcag gtgtctatgc tggtgatcct 180

tctaagctca gcatgaaggc tgcatttggg aaggtttggc ggttggaaga aactggaggt 240

agtattattg gtggaaccat caagacaatt caggagagga gcaagaatcc aaaaccactg 300

aggga 305

<210> 498
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 498

ggacctggcc gcccgcctcc tccaggccgc gaagagtcag tggaggagtt cgtgcgccgc 60

aatcttggtg ctgaggtctt cgagcgcctc attgagcctt tctgctcagg tgtctatgct 120

ggtgatcctt ctaagctcag catgaaggct gcatttggga aggtttggcg gttggaagaa 180

actggaggta gtattattgg tggaacatca agacaattca ggagaggagc aagaatccaa 240

aaccactgag ggatgcccgc cttccgaagc 270

<210> 499
<211> 423
<212> nucleic acid
<213> Zea mays

<400> 499

atccaaagga agcaattaga aaagaatgct taattgatgg ggagctccag ggcgttgggc 60

agttgcatcc acgtagtcaa ggagttgaga cattaggaac aatatacagt tcctcactct 120

ttccaaatcg tgctcctgac ggtagggtgt tacttctaaa ctacatagga ggtgctacaa 180

acacaggaat tgtttccaag actgaaagtg agctggtcga agcagttgac cgtgacctcc 240

gaaaaatgct tataaattct acagcagtgg acccctttagt ccttggtgtt cgagtttggc 300

cacaagccat acctcagttc ctggtaggac atcttgatct tctggaagcc gcaaaagctg 360

ccctggaccg aggtggctac gatgggctgt tcctaggagg gaactatgtt gcaggagttg 420

ccc 423

<210> 500
<211> 314
<212> nucleic acid
<213> Zea mays

<400> 500

cacgcccctg ccggccatcg gggtgccgtt cgatatctcg gactccaagg ggcccgtgat 60

ccaatcgcca gtacggtcca aagagcaggt gagggagctc gtccccatcg accttgatat 120

gctccagttc gtcggggagt cactaaagat tctgcgaaat gagattgatg gaaaagctgc 180

tttgctagga tttgtggggg ccccatggac aattgcaact tacattgttg aaggggggat 240

gaccaatacg tacacaaata taaagagcat gtgccataca gctccagatg tcttgaaggg 300

tcttctctct cact 314

<210> 501
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 501

gaaggaggtt catcaaagaa ctttacattg attaagaaaa tggccttctc agaaccagcg 60

attctacaca atttgctaca gaagttcaca acatcaatgg ctaactatat taaataccaa 120

gcggacaatg gggcgcaggc tgtccaaatt ttcgattcat gggctactga actcagcccg 180

actgattttg aggagtttag cctgccttat ctaaagcaga tagtggatag tgttagggaa 240

acacatccta acttgcctct gatactctac gcaagtggat ctggggg 287

<210> 502
<211> 272
<212> nucleic acid
<213> Zea mays

<400> 502

gtccagtgta tacagatatt tgattcatgg ggtggacagc ttccacctca tgtatgggag 60

cagtggtcaa aaccatatat caaacaggag ttgatgttat tgggcttgac tggacagtgg 120

acactactga tggaaggtgg cgccttggta atggcattag tgtacaaggg aatgtggatc 180

cagcattttt gttctcacca ttaccagtac tgactgatga aattcataga gttgtgaaag 240

cagctggtcc aaaaggtcat accttaatct gg 272

<210> 503
<211> 407
<212> nucleic acid

<213> Zea mays

<400> 503

agggcagagg gcaggaaaag attgggatct aacacagcag tccaagggaa cgtggatcct 60

ggtgttcttt ttggatccaa agagtttata agcaggcgga tttacgacac tgtgcagaag 120

gctggcaatg ttggacatgt actgaacctt ggccatggca tcaaggttgg aactccggag 180

gaaaatgttg ctcacttctt cgaggtcgca aaagggatca gatactaaag aaccttgcat 240

ggttctttcc tttctccaaa tcggcagaag ttgtagagtc ggcggtcgag gatagatgca 300

gaaagccatg tgcagtatag agtccctgaa aacatttttg tgactgattc tgtctgtcgc 360

aattcaagtt ccggtttcaa tgtgatattg taagcagatt tgagacg 407

<210> 504
<211> 418
<212> nucleic acid
<213> Zea mays

<400> 504

agcaagtgaa ggccaggttg cgggaggcag gcctggcacc agtgcccatg atcatctttg 60

ctaaggatgg gcattttgcc ctggaggagc tggcccaagc tggctatgag gtggttgggc 120

ttgactggac agtggcccca aagaaagccc gggagtgtgt ggggaagacg gtgacattgc 180

agggcaacct ggacccctgt gccttgtatg catctgagga ggagatcggg cagttggtga 240

agcagatgct ggatgacttt ggaccacatc gctacattgc caacctgggc catgggcttt 300

atcctgacat ggacccagaa catgtgggcg cctttgtgga tgctgtgcat aaacactcac 360

gtctgcttcg acagaactga gtgtatacct ttaccctcaa gtaccactaa cacagatg 418

<210> 505
<211> 508
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (39)
<223>

<400> 505

cgagctggct gccattagag ccttcgcaac agaaataant agctaccgtc agccaccggt 60

tccggtaatt cgccggggga ggacccaccg cgtgccgcga gcggctgcaa ccacctactc 120

attgcgtttt caatggcaac aacgtgtacg tcggtctcgg tgccgtgcac cttcctcttg 180

cgcggcaggt ccgcccgcac catgcccaga cgcaagcagc tcacggccgt ccgctgcagc 240

gccgtcagac aggccgtagt ggaagaggcc tcgcccggga ccgcggacga tccgctgctg 300

gtgagcgcaa tcagagggac gaaggtcgag aagccacccg tatggctcat gaggcacgcc 360

gggaggtaca tgaagagcta ccaattgctc tgcgagcggc atccttcgtt ccgtgaaaga 420

tcagaaaatg tcgacctagt tgttgagatc tctttgcaac catggaaggt tttcaagcct 480

gaaggaatca tcttggtctc ggacattc 508

<210> 506
<211> 387
<212> nucleic acid
<213> Zea mays

<400> 506

cccacgcgtc cgcccactcg tccgaaattt tcgattcatg ggctactgag ctcagcccgg 60

ctgattttga ggagtttagc ctgccttatc taaagcagat agtggatagt gttagggaaa 120

cacatcctaa cttgcctctg atactctacg caagtggatc tgggggcttg ctggagaggc 180

ttcctttgac aggtgttgat gttgtcagct tggactggac ggtcgatatg gcagagggca 240

ggaaaagatt gggatctaac acagcagtcc aagggaacgt ggatcctggt gttcttttg 300

gatccaaaga gtttataagc aggcggattt acgacactgt gcagaaggct ggcaatgttg 360

gacatgtact gaaccttggc catggca 387

<210> 507
<211> 288
<212> nucleic acid
<213> Zea mays

<400> 507

gccgctgctg gtgagcgcaa tcagaaggag gaaggtcgag aagccacccg tctggctcat 60

gaggcaggcc gggaggtaca tgaagagcta ccaattgctc tgcgagcggt atccttgttc 120

cgtgaaagat cagaaaatgt cgacctagtt gttgagatct ctttgcaacc atggaaggtt 180

ttcaagcctg atggagtcat cttgttctcg gacatcctta ctccacttcc tgggatgaac 240

ataccttttg acattgtgaa gggaaaaggt ccagtgatct atgatcca 288

<210> 508
<211> 409
<212> nucleic acid
<213> Zea mays

<400> 508

gtccgcgagc gctgcagcac ctcggatccc gccccaatgg caacagcgtg tccgccgctc 60

tcgctgccgt ccacctccct cttccgcggc aggtccgccc gcgccgggcc cagacgcagg 120

cagctcacgg ccgtccgctg cagcgccgtc ggagaggcgg tagtggagga ggcctcgccc 180

gggacggcgg aagagccgct gctggtgagc gcaatcagag ggaggaaggt cgagaggcca 240

cccgtctggc tcatgaggca ggccgggagg tacatgaaga gctaccaatt gctctgcgag 300

cggtatcctt cgttccgtga aagatcagaa aatgtcgacc tagttgttga gatctctttg 360

caaccatgga aggttttcaa gcctgatgga gtcatcttgt tctcggaca 409

<210> 509
<211> 407
<212> nucleic acid
<213> Zea mays

<400> 509

agccaagtcg tcgcctcccc gacccaacgt tttgaccccc ttgcccgtcc gcgagcgctg 60

cagcacctgg gatcccgccc caatggcaac agcgtgtccg ccgctctcgc tgccgtccac 120

ctccctcttc cgcggcaggt ccgcccgcgc cgggcccaga cgcaggcagc tcacggccgt 180

ccgctgcagc gccgtcggag aggcggtagt ggaggaggcc tcgcccggga cggcggaaga 240

gccgctgctg gtgagcgcaa tcagagggag gaaggtcgag aggccacccg tctggctcat 300

gaggcaagcc gggaggtaca tgaagagcta ccaattgctc tgcgagcggt atccttcgtt 360

ccgtgaaaga tcagaaaatg tcgacctagt tgttgagatc tctttgc 407

<210> 510
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 510

taaagattct gcgaaatgag attgatggaa aagctgcttt gctaggattt gtgggggccc 60

catggacaat tgcaacttac attgttaaag gggggatgac caacacatac acaaatataa 120

agaacatgtg ccatacagct cccgatgtct taggtgtctt ctatctcatc ttgcagtagc 180

gatatctgac tatatcattt accaagttaa ctccggggcc cagtgtatac agatatttga 240

ttcatggggc ggacaacttc cacctcatgt gtggg 275

<210> 511
<211> 266
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (75)
<223>

<400> 511

tgccaagagc cgggccaagg ctgcgctcca cggccgtccg ggtcagcagc gagcaggagg 60

cggcggcggc cgtcnaggcg ccgtccggga ggaccatcga ggagtgcgag gccgacgccg 120

tcgctgggaa gttccctgct cccccgccgc tggttaggcc gaagcgcctg aaggaacgcc 180

ggagatcagg ccccttgaca tggcaaagcg cccccgtcgc aaccgcaaat cacctgctct 240

tagggctgca ttccaggaga cgagca 266

<210> 512
<211> 293
<212> nucleic acid
<213> Zea mays

<400> 512

gccgtacttg gacattatcc gactgcttcg ggatcattca gccctaccga ttgctgctta 60

ccaggtctcg ggcgagtact cgatgatcaa agccggcggg gccctgggca tggtggacga 120

gcagaaggtg atgatggagt cgctcatgtg cctgcgcgag ccggcgccga cgtcatcctg 180

acctacttcg cccgtcacgc cgccgcggtg ctgtgcggca tggggcccaa gtaggaggcg 240

aggcccgccc gccattcctg ccctgcactg tcattgtgga gttgagcgat gag 293

<210> 513

<211> 279
<212> nucleic acid
<213> Zea mays

<400> 513

actagattca catccaagat ttggagataa gaagacgtac cagatgaacc cagctaacta 60

cagagaagcc ctcatagaaa ccgcatcgga cgaggcagaa ggagccgaca ttctgctagt 120

gaaaccggga ttgccgtact tggacattat ccgactgctt cgggatcatt cagccctacc 180

gagtgctgct taccaggtct cgggcgagta ctcgatgatc agagccggag gggccctggg 240

catggtggac gagcataagg tgatgatgga gtcgctcat 279

<210> 514
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 514

cggacgcgtg gggttcattt tatggccctt ccgagaagct ttagattcaa atccaagatt 60

tggagataag acgacgtacc agatgaaccc agccaactac agagaagccc tcatagaaac 120

cgcagcggac gaggcagaag gagccgacat tctgctagtg aaaccgggat tgccgtactt 180

ggacatcatc cgactgcttc gggatcattc agccctaccg attgctgctt accaggtctc 240

gggcgagtac tcgatgatca aagccggcgg ggccctgggc atggtgg 287

<210> 515
<211> 427
<212> nucleic acid
<213> Zea mays

<400> 515

ctttgtgctc ccattgttta tccatgaagg agaagaagat gctcctatcg gagctatggc 60

agggtgctat aggcttgggt ggaggcacgg gctgcttgac gaggtttaca aggcccgcga 120

tgttggtgtt aatagtttcg ttctctttcc taaagttccc gatgcattga agtctccaac 180

aggagatgaa gcgtacaacg ataatggtct ggttccacgt acaatccgct tgctcaagga 240

caagttccct gatattgtta tctacacaga cgtcgcgtta gacccttatt catctgatgg 300

tcatgatggt attgtgaggg aagatggtgt aattatgaat gatgaaacag tttatcagtt 360

gtgcaaacag gctgtttcac aggctcgtgc cggtgctgat gttgtcagcc ctagtgacat 420

gatggat 427

<210> 516
<211> 303
<212> nucleic acid
<213> Zea mays

<400> 516

cccacgcgtc cgcaaggccc gcgatgttgg tgttaatagt ttcgttctct ttcctaaagt 60

tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctggttcc 120

acgtacaatc cgcttgctca aggacaagtt ccctgatatt gttatctaca cagacgtcgc 180

gttagaccct tattcatctg atggtcatga tggtattgtc agggaagatg gtgtaattat 240

gaatgatgaa acagtttatc agttgtgcaa acaggctgtt tcacaggctc gtgccggtgc 300

tga 303

<210> 517
<211> 277
<212> nucleic acid
<213> Zea mays

<400> 517

cttattcatc tgatggtcat gatggtattg tgagggaaga tggtgtaatt atgaatgatg 60

aaacagttta tcagttgtgc aaacaggctg tttcacaggc tcgtgccggt gctgatgttg 120

tcagccctag tgacatgatg gatggccgga ttggagcact tcgctctgct ctggacgccg 180

agggcttcca tgatgtctcc attatgtcct acaccgcaaa gtatgccagt tcattttatg 240

gccctttccg agaagcttta gattcaaatc caagatt 277

<210> 518
<211> 300
<212> nucleic acid
<213> Zea mays

<400> 518

cccacgcgtc cgcaaggccc gcgatgtagg tgttaatagt ttcgttctct ttcctaaagt 60

tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctggttcc 120

acgtacaatc cgcttgctca aggacaagtt ccctgatatt gttatctaca cagacgtcgc 180

gttagaccct tattcatctg atggtcatga tggtattgtt agggaagatg gtgtaattat 240

gaatgatgaa acagtttatc agttgtgcaa acaggctgtt tcacaggctc gtgccggtgc 300

<210> 519
<211> 306
<212> nucleic acid
<213> Zea mays

<400> 519

cccacgcgtc cgcccacgcg tccgcccacg cgtccgccca cgcgtccggg acaagttccc 60

tgatattgtt atctacacag acgtcgcgtt agacccttat tcatctgatg gtcatgatgg 120

tattgtgagg gaagatggtg taattatgaa tgatgaaaca gtttatcagt tgtgcaaaca 180

ggctgtttca caggctcgtg ccggtgctga tgttgtcagc cctagtgaca tgatggatgg 240

ccggattgga gcacttcgct ctgctctgga cgccgagggc ttccatgatg tctccattat 300

gtccta 306

<210> 520
<211> 391
<212> nucleic acid
<213> Zea mays

<400> 520

acgaacgcgt gggcggacgc gtgggcggac gcgtgggaga acgcgtgggc ggacgcgtgg 60

gtgaaggaga agaagatgct cctatcggag ctatgccagg gtgctatagg cttgggtgga 120

ggcacgggct gcttgacgag gtttacaggg gcgcgcgatg ttggtgttaa tagttttgtt 180

ctctttccta aagttcccga tgcattgaag tctccaacag gagatgaagc gtacaacgat 240

aatggtctgg ttccacgtac aatccgcttg ctcaaggaca agttccctga tattgttatc 300

tacacagacg tctctttttt ttcttagtca tctgatggtc actatggtat tgttacggaa 360

gatggggtaa ttatgaatga tgaaacactt t 391

<210> 521
<211> 191
<212> nucleic acid
<213> Zea mays

<400> 521

agatgctcct atcggagcta tgccagggtg ctataggctt gggtggaggc acgggctgct 60

tgacgaggtt tacaaggccc gcgatgttgg tgttaatagt ttcgttctct ttcctaaagt 120

tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctggttcc 180

acgtacaatt c 191

<210> 522
<211> 128
<212> nucleic acid
<213> Zea mays

<400> 522

gttagaccct tattcatctg atggtcatga tggtattgtg agggaagatg gtgtaattat 60

gaatgatgaa acagtttatc agttgtgcaa acaggctgtt tcacaggctc gtgccggtgc 120

tgatgttg 128

<210> 523
<211> 301
<212> nucleic acid
<213> Zea mays

<400> 523

gcagcttctc cgtgctgctg cgtctcctcc tcatcgtcct ctccagtgtc cagctcggcc 60

atggcgttca ccgtctcctt ctcccccgcc aacgttcaga tgctccaggc taggagtggc 120

cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccgggcc aaggctgcgc 180

tccacggccg tccgggtcag cagcgagcag gaggcggcgg cggccgtcag ggcgccgtcc 240

gggaggacca tcgaggagtg cgaggccgac gccgtcgctg ggaagttccc tgctcccccg 300

c 301

<210> 524
<211> 323
<212> nucleic acid
<213> Zea mays

<400> 524

caggattagc agcttctccg tgctgctgcg tctcctcctc atcgtcctct ccagtgtcca 60

gctcggccat ggcgttcacc gtctccttct cccccgccaa cgttcagatg ctccaggcta 120

ggagtggcca cggccacgcc acctttggaa gctgttccgc cgtgccaaga gccgggccaa 180

ggctgcgctc cacggccgtc cgggtcagca gcgagcagga ggcggcggcg gccgtcaggg 240

cgccgtccgg gaggaccatc gaggagtgcg aggccgacgc cgtcgctggg aagttccctg 300

ctccccccgcc gctggttagg ccg 323

<210> 525
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 525

cagattagca gcttctccgt gctgctgcgt ctcctcctca tcgtcctctc cagtgtccag 60

ctcggccatg gcgttcaccg tctccttctc ccccgccaac gttcagatgc tccaggctag 120

gagtggccac ggccacgcca cctttggaag ctgttccgcc gtgccaagag ccgggccaag 180

gctgcgctcc acggccgtcc gggtcagcag cgagcaggag gcggcggcgg ccgatcaggc 240

gccgtccggg ag 252

<210> 526
<211> 304
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (127)
<223>

<400> 526

cacaggatta gcagcttctc cgtgctgctg cgtctcctcc tcatcgtcct ctccagtgtc 60

cagctcggcc atggcgttca ccgtctcctt ctccccgcc aacgttcaga tgctccaggc 120

taggagntgg cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccgggcc 180

aaggctgcgc tccacggccg tccgggtcag cagcgagcag gaggcggcgg cggccgtcag 240

ggcgccgtcc gggaggacca tcgaggagtg cgaggccgac gccgtcgctg ggaagttccc 300

tgct 304

<210> 527
<211> 295
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (267),(291)...(292)
<223> unsure at all n locations

<400> 527

cacaggatta gcagcttctc cgtgctgctg cgtctcctcc tcatcgtcct ctccagtgtc 60

aagctcggcc atggcgttca ccgtctcctt ctcccccgcc aacgttcaga tgctccaggc 120

taggagtggc cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccgggcc 180

aaggctgcgc tccacggccg tccgggtcag cagcgagcag gaggcggcgg cggccgtcag 240

gcgccgtccg ggaggaccat cgaggantcg aagccgacgc cgtgctggga nnttc 295

<210> 528
<211> 239
<212> nucleic acid
<213> Zea mays

<400> 528

ccacgcgtcc gcagattagc agcttctccg tgctgctgcg tctcctcctc atcgtcctct 60

ccagtgtcca gctcggccat ggcgttcacc gtctccttct cccccgccaa cgttcagatg 120

ctccaggcta ggagtggcca cggccacgcc acctttggaa gctgttccgc cgtgccaaga 180

gccgggccaa ggctgcgctc cacggccgtc cgggtcagca gcgagcagga ggcggcggc 239

<210> 529
<211> 302
<212> nucleic acid
<213> Zea mays

<400> 529

acaggattag cagcttctcc gtgctgctgc gtctcctcct catcgtcctc tccagtgtcc 60

agctcggcca tggcgttcac cgtctccttc tcccccgcca acgttcagat gctccaggct 120

aggagtggcc acggccacgc cacctttgga agctgttccg ccgtgccaag agccgggcca 180

aggctgcgct ccacggccgt ccgggtcagc agcgagcagg aggcggcggc ggccgtcaag 240

gcgccgtccg ggaggaccat cgaggagtgc gaggccgacg ccgtcgctgg gaagttccct 300

gc 302

<210> 530
<211> 242
<212> nucleic acid
<213> Zea mays

<400> 530

gccacgggtc cgcagtatta gcagcttctc cgtgctgctg cgtctcctcc tcatcgtcct 60

ctccagtgtc cagctcggcc atggcgttca ccgtctcctt ctccccagcc aacgttcaga 120

tgctccaggc taggagtggc cacggccacg ccacctttgg aagctgttcc gccgtgccaa 180

gagccgggcc aaggctgcgc tcaacggccg tccgggtcag cagcgagcag gaggcggcgg 240

cg 242

<210> 531
<211> 255
<212> nucleic acid
<213> Zea mays

<400> 531

cccacgcgtc cgaccacgcg tccgcggacg ctggccccgg cgatgatgga cctctccagt 60

gtccagctcg gccatggcgt tcaccgtctc cttctccccc gccaacgttc agatgctcca 120

ggctaggagt ggccacggcc acgccacctt tggaagctgt tccgccgtgc caagagccgg 180

gccaaggctg cgctccacgg ccgtccgggt cagcagcaag caaaaggcgg cgacggacgt 240

caggcggcgt cccgg 255

<210> 532
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 532

ctcttttgac gacatggttg agatgggcaa agatgctggc catgagctga aggcaaaggc 60

tgggcctggc ttctttgata gcttgcaatg aaaagaatga gcgaccatga gcaatttcaa 120

ttgtcactct tttggttaga aacagagggc ccaagtagag tgtggagagg tttgtttttg 180

tttcttcttt ctcctgctaa ttctgctaga gaagggtgta cctggtgtag tggtgagccg 240

agtcatcagg tcgcgggttc gaagcatcca gtctccgtat 280

<210> 533
<211> 325
<212> nucleic acid
<213> Zea mays

<400> 533

aaacacgcgt ccgcggacgc tggggacacg gttaaggaaa ctcaaggaag gagatgtgtc 60

tgctacattg taggcgcagg ctgagattaa ggcggctaaa tatggcagaa aatgcaacag 120

ctgtactatc agtggaagaa atgcttccgg cagttgccca aggtgctatt ggaatcgctt 180

gccgaagcaa cgatgacaaa atgatggagt atctgtcctc gttgaaccac gaggatacca 240

gactagctgt cacatgcgaa agagaattct tggcagttct tgatggcaac tgccgaactc 300

caattgcggc ctatgcttac cgtga 325

<210> 534
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 534

tgcattcata tgcttgactg caaattctct cgcggagctt cctgctggca gtgttggtgg 60

aagtgcttcc ttgcctagac aatctcacat tctctacaga tatccatcac tgaaagtagt 120

taacttcaga ggaaatgttc agacacggtt aaggaaactc actgaaggag atgtgtctgc 180

tacattgttg gcgctggctg gattaaggca gctaaatatt gcagaaaatg caacagctgt 240

actatcagtg gaagaaatgc ttccggcagt tgcccaagtg ct 282

<210> 535
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 535

caggactgct cattccgggg cctactggct tcaccagacg gatctaaagt atttgagacg 60

gcaagaagtg gaccgtactc tttcgacgac atggtcgaga tgggcaaaga cgctggccac 120

gaactgaagg cgaaggctgg gcctggcttc ttcgatagcc ttcaatgaac agaatgtgcg 180

gccatgcgcg atttcagttg gcacccttc ggttgaaaac gagggccata gtaggttgtt 240

gaggggtttg tttttgtttc ttctttttt ctcctactac ta 282

<210> 536
<211> 174
<212> nucleic acid
<213> Zea mays

<400> 536

cgggaactgc tcattccggg gcctactgtc ttcaccagac ggatctaaag tatttgagac 60

ggcaagaagt ggaccgtact ctttcgacga catggtcgag atgggcaaag acgctggcca 120

cgagctgaag gcgaaggctg ggcctggctt cttcgatagc cttcaatgaa caga 174

<210> 537
<211> 315
<212> nucleic acid
<213> Zea mays

<400> 537

cgggaactgc tcattccggg gcctactgtc ttcaccagac ggatctaaag tatttgagac 60

ggcaagaagt ggaccgtact ctttcgacga catggtcgag atgggcaaag acgctggcca 120

cgagctgaag gcgaaggctg ggcctggctt cttcgatagc cttcaatgaa cagaatgtgc 180

ggccatgcgc gatttcagtt ggcacccttt cggttgaaaa cgagggccaa agtaggttgt 240

tcaggggctt gtttgtgata cttctgagtt tctcctacta ctaggtcctg ctagagcctt 300

gtactaccac tcatg 315

<210> 538
<211> 338
<212> nucleic acid
<213> Zea mays

<400> 538

ctctatgaaa gatgttccaa catatctacc tgaaggcaca atattgccct gtgagctccg 60

acgagaagat gtaagagatg cattcatatg cttgactgca aattcgctcg cggagcttcc 120

tgctggcagt gttgttggaa gtgcttcctt gcggagacaa tctcagattc tctacagata 180

tccatcactg aaagtagtta acttcagagg aaatgttcag acacggttaa agaaactcaa 240

ggaaagagat gtgtctgcta cattgttggc gctggctgga ttaaagcggc taaaaatggc 300

agaaaatgca acagctgtac tatcagtgga agaaatgc 338

<210> 539
<211> 422
<212> nucleic acid
<213> Zea mays

<400> 539

ccaaggtctc actcatccgg attgggacgc gtgggagtcc tctggctctt gcacaagccg 60

atgaaactcg ggaaaaactg aaagccgcac actctgagtt agctgaggag ggggctattg 120

agatcgtcat cataaagacc acaggagaca tgatcttgga caaacccctt gcagatattg 180

gaggcaaggg tttattcacc aaggagatag atgatgcact cttgcaggga aggattgata 240

tagctgtgca ctctatgaaa gatgttccaa catatctacc tgaaggcaca atattgccct 300

gtaacctccc acgagaagat gtaagagatg cattcatatg cttgactgca aattcgctcg 360

cggagcttcc tgctggcagt gttgttggaa gtgcttcctt gcggagacaa tctcagattc 420

tc 422

<210> 540
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 540

ctctggctct tgcacaagcc catgaaactc gggaaaaact gaaagccgca cactctgagt 60

tagctgagga gggggctatt gagatcgtca tcataaagac cacaggagac atgatcttgg 120

acaaacccct tgcagatatt ggaggcaagg gtttattcac caaggagata gatgatgcac 180

tcttgcaggg aaggattgat atagctgtgc actctatgaa agatgttcca acatatctac 240

ctgaaggcac aatattgccc tgtaacctcc cacgagaaga 280

<210> 541
<211> 255
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (178)
<223>

<400> 541

gggtttattc accaaggaga tagatgatgc actcttgcag ggaaggattg atatagctgt 60

gcactctatg aaagatgttc caacatatct acctgaaggc acaatattgc cctgtaacct 120

cccacgagaa gatgtaagag atgcattcat atgcttgact gcaaattcgc tcgcggantt 180

cctgctggca gtgttgttgg aagtgcttcc ttgcggagac aatctcagat tctctacaga 240

tatccatcac tgaaa 255

<210> 542
<211> 269
<212> nucleic acid
<213> Zea mays

<400> 542

gcactcttgc agggaaggaa tgatatagct gagcactcta tgaaagatgt tccaacataa 60

ctacctgaag gcacaatatt gccctgtaac ctcccacgag aagatgtaag agatgcattc 120

atatgcttga ctgcaaattc gctcgcggag cttcctgctg gcagtgttgt tggaagtgct 180

tccttgcgga gacaatctca gattctctac agatatccat cactgaaagt agttaacttc 240

agaggaaatg ttcagacacg gttaaggaa 269

<210> 543
<211> 334
<212> nucleic acid
<213> Zea mays

<400> 543

agagccacgc gtccgcccac gcgtccgcct tgtcaaagcc ggcaatggtg ttgccaccct 60

tggcctccct gactcccctg gcttccccaa cggggccacg taccacactt tgacggcacc 120

ctacaatgat gtgcaccgca gtgatcaaac tgttcgaaga caaacccgtg gagattgcgg 180

gcgtcctcct cgaaccagtt gttggcaacg ctcgtttcat ccctccagag acatggtttc 240

cttaacgctc tccgcgactt gaccaggcag gatggtgcgc tccagggcgt cgatgaactg 300

atgaccggct tccgtctgtc ttacggtgga cctc 334

<210> 544
<211> 429
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (316)
<223>

<400> 544

cccacgcgtt cggcgggaac cctctagcca tgaccgctgg gatccacacg ctcaagcggc 60

tgacagagcc cggcacctac gagtacttgg acaagatcac cggcgaactc gtccgtggga 120

tactggacgt cggtgcgaaa gcagggcatg atatgtgcgg aggacatatc agaggaatgt 180

ttggcttctt cttcaccggc gggcccgtcc acaacttcgg ggacgccaag aagagcgaca 240

ccgagaagtt cgggaggttc taccgtggca tgctggagga gggcgtgtac ttcgctccat 300

cgcagttcga ggcggngttc accagcttgg cgcacacctt ccaggacatc gagaagaccg 360

tcgaggccgc tgagaaggtt ctgaagcgga tatagggggt ccgcttcaag caagcatgca 420

gagagcatt 429

<210> 545
<211> 403
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (360)
<223>

<400> 545

aatgggatcc acacgctcaa gcggctgaca gagcccggca cctacgagta cttggacaag 60

atcaccggcg aactcgtccg tgggatactg gacgtcggtg cgaaagcagg gcatgagatg 120

tgcggaggac atatcagagg aatgtttggc ttcttcttca ccggcgggcc cgtccacaac 180

ttcggggacg ccaagaagag cgacaccgag aagttcggga ggttctaccg tggcatgctg 240

gaggagggcg tgtacttcgc tccctcgcag ttcgaggcgg ggttcaccag cttggcgcac 300

acctcccagg acatcgagaa gaccgtcgag gccgctgaga aggttctgaa gcggatatan 360

ggggtccgct tcaagcaagc atgcagagag catttcctcg tat 403

<210> 546
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 546

agaaactgtt cgaggacaac gcgggggaga ttgctgccgt cttcctcgag ccagttgttg 60

gcaacgctgg tttcatcccc ccacagcctg gtttccttaa cgctctccgc gacttgacca 120

aacaggatgg tgcgctcctg gtcttcgatg aagtgatgac cggcttccgt ctgtcttacg 180

gtggagctca ggagtacttc gggatcaccc ctgacgtgac gaccttgggc aagatcatcg 240

ggggtggcct ccccgttggt gcctacggtg ggagaaggga catcatggag atggttgccc 300

ccgaaggccg at 312

<210> 547
<211> 286
<212> nucleic acid
<213> Zea mays

<400> 547

ggttgccccc gcaggccgat gtaccaggca ggaactctca gcgggaaccc tctagccatg 60

accgctggga tccacacgct caagcggctg acagagcccg gcacctacga gtacttggac 120

aagatcaccg gcgaactcgt ccgtgggata ctggacgtcg gtgcgaaagc agggcatgag 180

atgtgcggag gacatatcag aggaatgttt ggcttcttct tcaccggcgg gcccgtccac 240

aacttcgggg acgccaagaa gagcgacacc gagaagttcg ggaggt 286

<210> 548
<211> 285
<212> nucleic acid
<213> Zea mays

<400> 548

cctgacgtga cgaccttggg caagatcatc gggggtggcc tccccgttgg tgcctacggt 60

gggagaaggg acatcatgga gatggttgcc cccgcaggcc gatgtaccag gcaggaactc 120

tcagcgggaa ccctctagcc atgaccgctg ggatccacac gctcaagcgg ctgacagagc 180

ccggcaccta cgagtacttg gacaagatca ccggcgaact cgtccgtggg atactggacg 240

tcggtgcgaa agcagggcat gagatgtgcg gaggacatat cagag 285

<210> 549
<211> 243
<212> nucleic acid
<213> Zea mays

<400> 549

gaccggcttc cgtctgtctt acggtggagc tcaggagtac ttcgggatca cccctgacgt 60

gacgaccttg ggcaagatca tcgggggtgg cctccccgtt ggtgcctacg gtgggagaag 120

ggacatcatg gagatggttg cccccgcagc cgatgtacca ggcaggaact ctcagcggga 180

accctctagc catgaccgct gggatccaca cgctcaagcg gctgacagag cccggcacct 240

acg 243

<210> 550
<211> 247
<212> nucleic acid
<213> Zea mays

<400> 550

gtttccttaa cgctctccgc gacttgacca aacaggatgg tgcgctcctg gtcttcgatg 60

aagtgatgac cggcttccgt ctgtcttacg gtggagctca ggagtacttc gggatcaccc 120

ctgacgtgac gaccttgggc aagatcatcg ggggtggcct ccccgttggt gcctacggtg 180

ggagaaggga catcatggag atggttgccc ccgcaggccg atgtaccagg caggaactct 240

cagcggg 247

<210> 551
<211> 223
<212> nucleic acid
<213> Zea mays

<400> 551

gcacgaggca gggccgatgt accaggcagg aactctcagc gggaaccctc tagccatgac 60

cgctgggatc cacacgctca agcggctgac agagcccggc acctacgagt acttggacaa 120

gatcaccggc gaactcgtcc gtgggatact ggacgtcggt gcgaaacagg gcatgagatg 180

tgcggaggac atatcagagg aatgtttggc ttcttcttca ccg 223

<210> 552
<211> 218
<212> nucleic acid
<213> Zea mays

<400> 552

gcacgaggca gggccgatgt accaggcagg aactctcagc gggaaccctc tagccatgac 60

cgctgggatc cacacgctca agcggctgac agagcccggc acctacgagt acttggacaa 120

gatcaccggc gaactcgtcc gtgggatact ggacgtcggt gcgaaagcag ggcatgagat 180

gtgcggagga catatcagag gaatgtttgg cttcttct 218

<210> 553
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 553

gcgaaacagg gcatgagatg tgcggaggac atatcagagg aatgtttggc ttctacttca 60

ccggcgggcc cgtccacaac ttcggggacg ccaagaagag cgacaccgag aagttacaga 120

ggttctaccg tggcatgctg gaagaggcgt gtacttcgct ccctcgcagt tcgaggcggg 180

gttcaccagc ttggcgcaca cctcccagga catcgagaag accgtcgagg ccgtaatgaa 240

ggttctgaag cggatatagg gggtacgctt caagc 275

<210> 554
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 554

cttcggggac gccaagaaga gcgacaccga gaagttcggg aggttctacc gtggcatgct 60

ggaggagggc gtgtacttcg ctccctcgca gttcgaggcg gggttcacca gcttggcgca 120

cacctcccag gacatcgaga agaccgtcga ggccgctgag aaggttctga agcggatata 180

gggggtccgc ttcaagcaag catgcagaga gcatttcctc gtatctacgt tcttgtactc 240

ttagttctat at 252

<210> 555
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 555

ctctagccat gaccgctggg atccacacgc tcaagcggct gacagagccc ggcacctacg 60

agtacttgga caagatcacc ggcgaactcg tccgtgggat actggacgtc ggtgcgaaag 120

cagggcatga gatgtgcgga ggacatatca gaggaatgtt tggcttcttc ttcaccggcg 180

ggcccgtcca caacttcggg gacgccaaga agagcgacac cgagaagttc gggaggttct 240

acgtggcatg cctggagagg gcgtgtactt cggctccctc gcagttcgag gcggg 295

<210> 556
<211> 331
<212> nucleic acid
<213> Zea mays

<400> 556

ccacgcgtcc gagggcgtgt acttcgctcc ctcgcagttc gaggcggggt tcaccagctt 60

ggcgcacacc tcccaggaca tcgagaagac cgtcgaggca gctgagaagg ttctgaagcg 120

gatatagggg gtccgcttca agcaagcatg cagagagcat ttcctcgtat ctacgttctt 180

gtactcttag ttctatatgc caccgaggtt ttgtattgtg cagcagcagg acagcttctg 240

taagttcctc tttctgaatt agtgggtctt gtttttgtca gtgccaataa atctctggtc 300

cacgattacg gtttcgttgt tgtactgatg t 331

<210> 557
<211> 423
<212> nucleic acid
<213> Zea mays

<400> 557

gacccaatcg ccgcaaaccc ctccggaatt tcttatcccc cctcatctgc tccacctccg 60

acctcgcgcg agacgagcaa gcccaagtat ggccggagca gcagcagccg ccgtggcgtc 120

cggggtctcg gcccggccgg ccgcgccgag gagggcttct gcgggacgcc gcgctcggct 180

gtcggtggtg cgggccgcga tatccctcga gaagggcgag aaggcgtaca cggtgcagaa 240

gtccgaggag atcttcaacg ccgccaagga gctgatgcct ggaggtgtta actcgccagt 300

ccgagccttc aaatctgttg gtgggcagcc agtagttttc gactctgtaa agggttctcg 360

tatgtgggat gttgatggga atgagtacat tgattacgtt ggttcctggg gtcctgcaat 420

cat 423

<210> 558
<211> 302
<212> nucleic acid
<213> Zea mays

<400> 558

cggacgcgtg ggcggacgcg tgggcgccga ggagggcttc tgcgggacgc cgcgctcggc 60

tgtcggtggt gcgggccgcg atatccctcg agaagggcga gatagcgtac acggtgcagc 120

agtccgagga gatcttcaac gccgccaatg agctgatgcc tggaggtgtt aactcgccag 180

tccgagcctt caaatctgtt ggtgggcagc cagtagtttt cgactctgta aagggttctc 240

gtatgtggga tgttgatggg aatgagtaca ttgattacgt tggttcctgg ggtcctgcaa 300

tc 302

<210> 559
<211> 305
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (168)
<223>

<400> 559

ctgctccacc tccgacctcg cgcgagacga gcaagcccaa gtatggccgg agcagcagca 60

gccgccgtgg cgtccggagt ctcggcccgg ccggccgcgc cgaggagggc ttctgcggga 120

cgccgcgctc ggctgtcggt ggtgcgggcc gcgatatccc tcgagaangg cgagaaggcg 180

tacacggtgc agaagtccga ggagatcttc aaggccgcca aggagctgat gcctggaggt 240

gttaactcgc cagtccgagg cttcaaatct gttggtgggc agccagtagt ttcgactctg 300

taaag 305

<210> 560
<211> 276
<212> nucleic acid
<213> Zea mays

<400> 560

gctccacctc cgacctcgcg cgagacgagc aagcccaagt atggccggag cagcagcagc 60

cgccgtggcg tccggggtct cggcccggcc ggccgcgccg aggagggctt ctgcgggacg 120

ccgcgctcgg ctgtcggtgg tgcgggccgc gatatccctc gagaagggcg agaaggcgta 180

cacggtgcag aagtccgagg agatcttcaa cgccgccaag gagctgatgc ctggaggtgt 240

taactcgcca gtccgagcct tcaaatctgt tggtgg 276

<210> 561
<211> 225
<212> nucleic acid
<213> Zea mays

<400> 561

cccacgcgtc cgcccacgcg tccgcccacg cgtccgctgc gggacccgcg ctcggctgtc 60

ggtggtgcgg gccgcgatat ccctcgagaa gggcgagaag gcgtacacgg tgcagaagtc 120

cgaggagatc ttcaacgccg ccaaggagct gatgcctgga ggtgttaact cgccagtccg 180

agccttcaaa tctgtatgtg ggcagccagt agttttcgac tctgt 225

<210> 562
<211> 276
<212> nucleic acid
<213> Zea mays

<400> 562

cagacgcgtg ggcgagacgc gtgggctgct ccacctccga cctcgcgcga gacgagcaag 60

cccaagtatg gccggagcag cagcagccgc cgtggcgtcc ggggtctaca cccggccgga 120

cgcgccgagg agggcttctg cgggacgccg cgctcggctg tcggtggtgc gggccgcgat 180

atccctcgag aagggcgaga aggcgtacac ggtgcagaag tccgaggaga tcttcaacgc 240

cgccaaggag ctgatgcctg gaggtgttaa ctcgcc 276

<210> 563

<211> 251
<212> nucleic acid
<213> Zea mays

<400> 563

ccacgcgtcc gtccacctcc gacctcgcgc gagacgagca agcccaagta tggccggagc 60

agcagcagcc gccgtggcgt ccggggtctc ggcccggccg gccgcgccga ggagggcttc 120

tgcgggacgc cgcgctcggc tgtcggtggt gcgggccgcg atatccctcg agaagggcga 180

gaaggcgtac acggtgcaga agtccgagga gatcttcaac gccgccaagg agctgatgcc 240

tggaggtgtt a 251

<210> 564
<211> 337
<212> nucleic acid
<213> Zea mays

<400> 564

caagtatcga aatggtccgc tttgtcaact cagggacaga agcctgcatg ggagcgctcc 60

gcctcgtgcg cgcattcacc gggcgggaga agatcatcaa gttcgaaggc tgctaccatg 120

gccatgccga ttccttcctt gtcaaagccg gcagtggtgt tgccaccctt ggcatcactg 180

actcccctgg cgtccccaag ggggccacct acgagacttt gacggcaccc tacaatgatg 240

tcgcggcagt gaagaaactg ttcgacgaca acgcgggggga gattgctgcc gtcttcctcg 300

agtcagttgt tggcaacgct ggtttcaatc ccccaca 337

<210> 565
<211> 263
<212> nucleic acid
<213> Zea mays

<400> 565

gaaactctga agaaaggaac tagctttggt gctccatgtt tgctggagaa cgtattggct 60

gagatggtca tctctgccgt gccaagtatc gaaatggtcc gctttgtcaa ctcagggaca 120

gaagcctgca tgggagcgct ccgcctcgtg cgcgcattca ccgggcggga gaagatcatc 180

aagttcgaag gctgctacca tggccatgcc gattccttcc ttgtcaaagc cggcagtggt 240

gttgccaccc ttggcctccc tga 263

<210> 566
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 566

gaacaccacg aatcgtctgc attcggctcg aggacactct gaagaaagga actagctttg 60

gtgctccatg tttgctggag aacgtattgg ctgagatggt catctctgcc gtgccaagta 120

tcgaaatggt ccgctttgtc aactcaggga cagaagcctg catgggagcg ctccgcctcg 180

tgcgcgcatt caccgggcgg gagaagatca tcaagttcga aggctgctac catggccatg 240

ccgattcctt ccttgtcaaa gccggcagtg gtgttgccac ccttggcctc cctgactccc 300

ctggcgtccc 310

<210> 567
<211> 124
<212> nucleic acid
<213> Zea mays

<400> 567

gctttgtcaa ctcagggaca gaagcctgca tgggagcgct ccgcctcgtg cgcgcattca 60

ccgggcggga gaagatcatc aagttcgaag gctgctacca tggccatggc gaatccttcc 120

ttgt 124

<210> 568
<211> 295
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (126)
<223>

<400> 568

cggacgcgtg gcgagacgcg tgggcggacg cgtgggcctt gtcaaagccg gcagtggtgt 60

tgccaccctt ggcctccctg actcccctgg cgtcccacac ggggccacca cctgagactt 120

tgacangaac cctacaatga tgtcgcggca gtgaagaaac tgttcgagga caacgcgggg 180

gagattgctg ccgtcttcct cgagccagtt gttggcaacg ctggtttcat ccccccacag 240

cctggtttcc ttaacgctct ccgcgacttg accaaacagg atggtgcgct cctgg 295

<210> 569
<211> 253
<212> nucleic acid
<213> Zea mays

<400> 569

cccacgcgtc cgcccacgcg tccgctcccc tggcgtcccc aaggggccca cctacgagac 60

tttgacggca ccctacaatg atgtcgcggc agtgaagaaa ctgttcgagg acaacgcggg 120

ggagattgct gccgtcttcc tcgagccagt tgttggcaac gctggtttca tccccccaca 180

gcctggtttc cttaacgctc tccgcgactt gaccaaacag gatggtgcgc tcctggtctt 240

cgatgaagtg atg 253

<210> 570
<211> 363
<212> nucleic acid
<213> Zea mays

<400> 570

ggtgcacggt agtgagtcgg aatcggctcg agtggcgatg gaaatctggg agctactgaa 60

agaattcttt gatgcagaaa ttagaaagct gaagctacaa ccatattatt tcgctattgt 120

tgttactgag aatgttctac agaaggaaaa ggaccacatt gagggctttg cacctgaggt 180

agcttgggtt actaaatctg ggaaatctga cctggaagca ccgattgcaa gtgcgcccac 240

aggtgagctt gtaatgaacc cggctttctc catatggata agacgccacc gagacttacc 300

cttgaggtgt aatcaatggt gtcatgttgt tagatgggag tttagcgatc cgactccttt 360

cat 363

<210> 571
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 571

accacgcgtc cgcccacgcg tccgagaagc aggaattaga gttaaagtgg acgactcaga 60

gctgcgaact cctggatgga aattcaatca ctatgagatg aaaggggttc ctgtaagaat 120

atagataggt ccacgtgatg tcacaaataa gagtgttgtg gtttctaggc gtgatgtccc 180

tggaaagcaa ggaaaggagt ttggagtgtc tatggagcct tcgatattgg tgaaccatat 240

aaatggtcgt ctagatgaca tacaagcatg ccttttacag aaggccttaa aatccgtgat 300

agtaacattg tc 312

<210> 572
<211> 270
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (11)...(12)
<223> unsure at all n locations

<400> 572

ttaacttgca nngccaggtc aaggtctaga attcccaggc cgacctacga ctacacgtcg 60

gcccacccgt ccggccaaga tggctcctga gggctaagaa aagctgtaca ccaaggtcaa 120

gagcattcac gacagcctga tcgaggctgg tgtccgcgtc gagtccgact accgtgaggg 180

ctactccccc ggatggaagt tcaacgactg ggagctcaag ggtaatcctc ttcctaacca 240

attccgtccc aaggattccc aaaaaggttt 270

<210> 573
<211> 427
<212> nucleic acid
<213> Zea mays

<400> 573

cccacgcgtc cgcccacgcg tccgcccacg cgtccgccca cgcgtccgtg ggaaaatgtg 60

gccagatgct tctgatactg atgcttcctc tcactataag cttccgttct caagaactgt 120

ctacattgag aaaactgatt ttcgccttaa ggactcaaaa gactactatg ggctggcccc 180

tggtaaatct gtcatgctaa ggtatgcgtt ccccataaaa tgcacagacg ttatctatgg 240

tgatactcct gatgatattg ttgaaattcg agcagaatat gatcctttga agacttctaa 300

acttaagggt gttctgcact gggttgctga gccagcacct ggtgtcgaac cattgaaggt 360

ggaagtaaga ctattcgaga aattgttcat gtcagagaat cctgctgaat tggaggattg 420

gcttggt 427

<210> 574
<211> 273
<212> nucleic acid
<213> Zea mays

<400> 574

gttgaggaga gtggaaattt atgaattcag ccgattgaat atggtttaca ctcttctaag 60

caagcgaaag cttctttggt ttgtacaaaa caagaaggtc gaagattgga cagacccacg 120

ttttcccact gtccaaggca tagtacgtcg gggcttgaag gttgatgcat tgatacagtt 180

tatactccaa cagggtgctt caaaaaatct gaatctcatg gaatgggata aactctggac 240

aatcaacaag aagataattg atccagtgtg cgc 273

<210> 575
<211> 267
<212> nucleic acid
<213> Zea mays

<400> 575

cccacgcgtc cggacggtat tgagtcaagg tgcagaaata ataccgtgga ggaaaatctc 60

tcattatgga aagagatggt taatggaact gaaaggggca tgcagtgctg tgtacggggt 120

aaacttgaca tgcaggatcc taacaagtca ctcagggatc ctgtttacta ccgctgtaat 180

actgatccac accatcgtgt tggttcgaag tacaaggtct atccaacata tgactttgcg 240

tgcccatttg tcgatgcatt ggagggg 267

<210> 576
<211> 380
<212> nucleic acid
<213> Zea mays

<400> 576

cggacgcgtg ggctgctgaa ttggaagatt ggcttggcga tcttaaccca cactcgaaag 60

aggtgataaa ggatgcttat gctgtaccat cacttgccac tgcggttctg ggtgacaagt 120

tccagtttga gcggcttggt tacttcgccg tggatactga ctccacacct gagaaactcg 180

tgttcaacag aactgttacc ctccgtgatt cgttcgggaa agctggaccc aagtgactgt 240

tcagtgtaat ttagggaggg cgctggtttt gatcggttgc agaagcgcac ctgaactata 300

caagttgtga agaaaatggt cgtctaatac agaacagttt aaagggcctt actctttata 360

aaatttaggg ttttttaaaa 380

<210> 577
<211> 373
<212> nucleic acid
<213> Zea mays

<400> 577

actgtttaca cactcaatca atctgggatt tgagcggatc aggacacccg tgaaaattag 60

ctctccaggt tggaagtatt ctcactggga aatgaaaggt gttccattga gaattgagat 120

tggtccaaaa gatctggcaa acaaacaggt acgcattgtc cgccgggaca acggtgcaaa 180

ggttgacatt ccggtgacca atttggttga agatgttaaa gtgttattgg atgagattca 240

aaaaaatctg ttcaaaacag ctcaagaaag gagagatgca tgtgttcagg tcgtcaactc 300

ttgggatgaa ttcacaactg ctctgaataa caaaaggttg atcttggctc cttggtgcga 360

tgaggaggaa gtt 373

<210> 578
<211> 299
<212> nucleic acid
<213> Zea mays

<400> 578

cgtgattcca gtgccttata aggacgctga cacaactgcc ataaagggag cctgcgaatc 60

aactgtttac acactcaatc aatctgggat tcgagcggat caggacaccc gtgaaaatta 120

ctctccaggt tggaagtatt ctcactggga aatgaaaggt gttccattga gaattgagat 180

tggtccaaaa gatctggcaa acaaacaggt acgcattgtc cgccgggaca acggtgcaaa 240

ggttgacatt ccggtgacca atttggttga agatgttaaa gtgttattgg atgagattc 299

<210> 579
<211> 286
<212> nucleic acid
<213> Zea mays

<400> 579

gccaatccag gtaattgtga ttccagtgcc ttataaggat gctgacacaa ctgccataaa 60

gggagcctgc gaatcaactg tttacacact cgatcaatct ggaattagag cggatcagga 120

cacccgtgaa aattactctc caggttggaa gtattcccac tgggaaatga aaggtgttcc 180

attgagaatt gagattggtc caaaagatct ggcaaacaaa caggtgcgtg ttgtccgccg 240

ggacaacggt gcaaaggttg acatccctgt gaccaatttg gttgaa 286

<210> 580
<211> 313
<212> nucleic acid
<213> Zea mays

<400> 580

gatgacaaag gcttagtatt accaccaaag gtagcgccaa tccaggtaat tgtgattcca 60

gtgccttata aggatgctga cacaactgcc ataaagggag cctgcgaatc aactgtttac 120

acactcgatc aatctggaat tagagcggat caggacaccc gtgaaaatta ctctccaggt 180

tggaagtatt cccactggga aatgaaaggt gttccattga gaattgagat tggtccaaaa 240

gatctggcaa acaaacaggt gcgtgttgtc cgccgggaca acggtgcaaa ggttgacatc 300

cctgtgacca att 313

<210> 581
<211> 307
<212> nucleic acid
<213> Zea mays

<400> 581

cccacgcgtc cgcacatggt gatgacaaag gcttagtatt accaccaaag gtagcgccaa 60

tccaggtaat tgtgattcca gtgccttata aggatgctga cacaactgcc ataaagggag 120

cctgcgaatc aactgtttac acactcgatc aatctggaat tagagcggat caggacaccc 180

gtgaaaatta ctctccaggt tggaagtatt cccactggga aatgaaaggt gttccattga 240

gaattgagat tggtccaaaa gatctggcaa acaaacaggt gcgtgttgtc cgccgggaca 300

acggtgc 307

<210> 582
<211> 227
<212> nucleic acid

<213> Zea mays

<400> 582

cccacgcgtc cggaaaggtg ttccattgag aattgagatt ggtccaaaag atctggcaaa 60

caaacaggtg cgtgttgtcc gccgggacaa cggtgcaaag gttgacatcc ctgtgaccaa 120

tttggttgaa gaggttaaag tgttactgga tgagattcaa aaaaatctgt tcaaaacagc 180

ccaagaaaag agagatgcct gtgttcatgt cgtgaacact tgggatg 227

<210> 583
<211> 427
<212> nucleic acid
<213> Zea mays

<400> 583

ggttgacaat attacatgtg caccgaccac aaaccaaata atcagcaaaa tggatttcga 60

gtggcatctc aacatgcaca accttaggta aaagcttgag atggagaaac taaaagtttc 120

caacagcgaa cacaaagagt ggctggggct ggcctaggag gggaggaaga agagtgccat 180

cacacgaaaa ccatgacctc acagcattgg tgcagtaaca tttcactatt tagagcctat 240

gatcaggctt taaagagtgg ctggggctgg cctaggaggg gaggaagaag agtgccatca 300

ctaacaaaac agcccctcga accatggttg ttttgcgacc tctaaaggtg gtaataacta 360

acttggaaga aggaaaagta ctagaccttg atggcaaaat gtggcctgat gcttctgata 420

ctgatgc 427

<210> 584
<211> 499
<212> nucleic acid
<213> Zea mays

<400> 584

tgggtagtgt aacatcacaa tgctactgcc aactcatata ctaggactcg ttggtcgtta 60

caacactcta gattcactcg tattaaccga atctgtgagc catgtcgacc aacaagggca 120

gcgcggccaa gggcggcgga gggaagaaga aggaggtgaa gaaggagacg aagctcggga 180

tggcctataa gaaggacgac aacttcgggg agtggtactc cgaggttgtt gttaacagtg 240

aaatgattga gtactatgac atttctggtt gttatatatt gaggccatgg gcgatggaaa 300

tctgggagct actgaaagaa ttctttgatg cagaaattaa aaagctgaag ctcaaaccat 360

attatttccc tttgtttgtt actgagaatg ttctacagaa ggaaaaggac cacattgagg 420

gctttgcacc tgaggtagct tgggttacta aatctgggaa atctgacctg gaagcaccga 480

ttgcaatccg ccccacaag 499

<210> 585
<211> 284
<212> nucleic acid
<213> Zea mays

<400> 585

gacatttctg gttgttatat attgaggcca tgggcgatgg aaatctggga gctactgaaa 60

gaattctttg atgcagaaat taaaaagctg aagctcaaac catattattt ccctttgttt 120

gttactgaga atgttctaca gaaggaaaag gaccacattg agggctttgc acctgaggta 180

gcttgggtta ctaaatctgg gaaatctgac ctggaagcac cgattgcaat ccgccccaca 240

agtgagactg tcatgtatcc gtacttctcc aaatggataa gaag 284

<210> 586
<211> 271
<212> nucleic acid
<213> Zea mays

<400> 586

ggaccgtggc ggtacgcgtg ggtttgtcga catatctgtc ccaaggaatg tcagcgcgtg 60

cgtctctgaa attggctccg agcgagtata caatgtcgac gacctgaaag aggtggtgga 120

agccaacaag gaagaccgtc tcaggaaagc gatggaggca cagacaatca tcgccgaaga 180

gctgaaacgg tttgaggcgt ggcgggactc gctggagacc gttccaacca tcaagaagct 240

gaggtcttac gccgacagga tccgggcctc g 271

<210> 587
<211> 230
<212> nucleic acid
<213> Zea mays

<400> 587

accatattga agaggctgct gtgcttagac ctgtaacaga atggaaattt atgtggtggc 60

cctatcatgg aaccgaggta tcagggaagt cgtggactgg atgtcgaaga aaagtggtat 120

tcctgcttct gagcttaggg aacacctatt catgctgcgt gacagtgatg ctacacgcca 180

tctgtttgag gtatcggctg ggttggactc tctggttctc ggtgaaggac 230

<210> 588
<211> 229
<212> nucleic acid
<213> Zea mays

<400> 588

gtggccccgt gctattcaag aactcactag cctgaaccat attgaagagg ctgctgttct 60

tagtacctgt aatagaatgg aaatttatgt ggtggcgcta tcatggaacc gtggtatcag 120

agaagtagtg gactggatgt cgaagaaaag tggtattccc gcttccgagc ttagggagca 180

cctgttcatc ttgcgaacag tgatgccaca cgccatctgt ttgaggtgt 229

<210> 589
<211> 492
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (11),(46),(49)...(56),(59),(442)
<223> unsure at all n locations

<400> 589

aggttaaagt ntgtaataga tgggatgtac tgtacacttc tccggnttnn nnnnnnggng 60

gggagccacg cgtccggaaa tgttaacgca ttaaaaggta tacggtatca gtaaacctta 120

caagtgtgat gccaagggaa aacggcatca gctgacacat tgctatattc ctgtttattt 180

cgtccgaata aagtatataa cttaagaaag gggctcttgc cccacagcag ctcaagcaaa 240

aatgtacaaa gaaaagcagc tcgagtagag agaatttgcc actctctcga cagattgagc 300

tgctgccatg gcgctaattc acgacacatt tgatgtctcg gcaagacggg gaggagctca 360

gtaagtgaga tgataaaaaa atagaatcag gttggagggt aagtatacac gggtagaaaa 420

attgcctcct tggccttaat tntgggtctt ctccaccttg gccttgatct tctgctcgat 480

gattgccttc tc 492

<210> 590
<211> 313
<212> nucleic acid
<213> Zea mays

<400> 590

cgtggaaaac tttccggttc caaaggacct ttggcccctt ccttttaaga acctacctgg 60

gtaaaccctt tttgaaaagg ctcctgtcct aatacttgta taaaatgaaa attatgtggt 120

agccctatca tggaaccgaa gtatcagaga agtagttgac tggatgtcaa agaaaagtgg 180

tattcctgct tctgagctta aggagcacct attcatgctg cgtgacagtg atgctacacg 240

ccatctgttc taagtatcag caaggttgga ctctttggtt ctcggtgaac gacaaatcct 300

tgctcaagtc aaa 313

<210> 591
<211> 457
<212> nucleic acid
<213> Zea mays

<400> 591

agcccacgcg tccgcccacg cgtccggtga aatcccgcac ctacctcctt cctctctcac 60

cgaggaccct cgcaccaaga actgagcggg aagagaggta gagaggcaag cgcacgagag 120

tttctgctcc tagtctcgtc tcgccccgcc tccgtctcct ttccctctct ggttctctct 180

ctgcgattct cgtcgcattg gttccgttcc ctcacgaaag gcggtagctt tctgtcttcc 240

ctgatctatc tagataatgg cgaccacgac gtcagcgacc accgccgcag cagcagccgc 300

caccatcgcc aagccgcggg ggtcgtcgtc ggacctctgc cagagggtgg ccggcggcgg 360

caggcggtgc tccggggtgg tgccgtgcga cgccgccggc gtggaggccc aggcgcatgc 420

cgtggcaaat gcggccagcg tcgccgccct cgagcag 457

<210> 592
<211> 267
<212> nucleic acid
<213> Zea mays

<400> 592

gaaggttgtt gtggtgaacc gctccgtgga aagggtggat gctattcgtg aggagatgaa 60

agatatagag atcgtgtaca ggcctctctc agacatgtat caagctgctg ctgaagctga 120

tgtcgtgttc accagcaccg catctgaaac ttcattgttc gcaaaagaac acgcagaggc 180

actccccct gtctctgata ctatgggagg tgttcgcctg tttgtcgaca tatctgtccc 240

caggaatgtc agcgcatgtg tgtctga 267

<210> 593
<211> 264
<212> nucleic acid
<213> Zea mays

<400> 593

cccacgcgtc cgcccacgcg tccgggatgc aagaaggttg ttgtggtgaa ccgctccgtg 60

gaaagggtgg atgctattcg tgaggagatg aaagatatag agatcgtgta caggcctctc 120

tcagacatgt atcaagctgc tgctgaagct gatgtcgtgt tcaccagcac cgcatctgaa 180

acttcattgt tcgcaaaaga acacgcagag gcactccccc ctgtctctga tactatggga 240

ggtgttcgcc tgtttgtcga cata 264

<210> 594
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 594

atcttattgc caaaggatgc aagaaggtgg ttgtggtcaa ccgttcagtg gaaagggtgg 60

atgccatccg cgaggagatg aaaggtatcg agattgtgta caggcctctt tcagagatgt 120

acgaagctgc tgctgaagct gatgtcctat tcacgagcac tgcatctgaa accccattgt 180

tcacaaaaga gcacgcagag gcacttccca caatttccga tgccatggat ggtgcccggc 240

tttttgtcga catatctgtc ccaaggaatg tcagcgcgtg cgtctctgaa attggctccg 300

cgcgagtata 310

<210> 595
<211> 290
<212> nucleic acid
<213> Zea mays

<400> 595

gtggtcaacc gttcagcaca aagggtggat gccatccgcg aggagattaa agctatcgag 60

attgtgtaca ggcctctctc ggagatgtat gaagctgctg ctgaagctga cgtcgtgttc 120

acgagcaccg catctgaaac cccattgttc acaaaagagc acgcagatgc acttcccact 180

gtttctgatg ccatgggcgg tgtccggctc tttgtcgaca tatctgtccc aaggaatgtc 240

agcgcgtgtg tctctgaaat tggctccgcg cgagtgtaca atgttgatga 290

<210> 596
<211> 168
<212> nucleic acid
<213> Zea mays

<400> 596

ggtggttgtg gtcaaccgtt cagtggaaag ggtggatgcc atccgcgagg agatgaaagg 60

tatcgagatt gtgtacaggc ctctttcaga gatgtacgaa gctgctgctg aagctgatgt 120

cctattcacg agcactgcat ctgaaacccc attgttcaca aaagagca 168

<210> 597
<211> 254
<212> nucleic acid
<213> Zea mays

<400> 597

acctgaaaga ggtggtggaa gccaacaagg aagaccgtct caggaaagcg atggaggcac 60

agacaatcat cgccgaagag ctgaaacggt ttgaggcgtg gcgggactcg ctggagaccg 120

ttccaaccat caagaagctg aggtcttacg ccgacaggat ccgggcctcg gagctcgaga 180

agtgcctgca gaagatcggg gacgacgctc tcaccaagaa gacgaggaga gccatcgagg 240

agctaagcac cggc 254

<210> 598
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 598

cggctcgagg aaagaggtgg tggaagccaa caaggaagac cgtctcagga aggcaatgga 60

ggcgcagaca atcatcaccg aagagctgaa acggtttgag gcatggcggg actcgctgga 120

gaccgttcca accatcaaga agctgaggtc atatgccgac aggatccgag cctcagagct 180

cgatgagtgc ctacagaaga tcggggatga cgttctcacc aagaagatga ggagagccat 240

cgaggagcta agcaccggca tcgtgaacaa 270

<210> 599
<211> 422
<212> nucleic acid
<213> Zea mays

<400> 599

cgaccatcaa gaagctgagg tcgtacgcgg acaggatcag ggcctcggag ctcgagaagt 60

gcctgcagaa agtaggtgag gacgccctca ccaagaagat gaggagagcc atcgaggagc 120

tgagcaccgg catcgttaac aagctcctcc atggcccgct gcagcacctg aggtgcgacg 180

gcagcgacag ccgcaccctt gacgagacgc tcgagaacat gcacgccctc aaccggatgt 240

tcagcctcga catggagaag gcgatcatcg agcagaagat caaggccaag gtggagaaga 300

cacaaaactg aggccaggaa gcaatttttc taccaccatt atctatatat atagcgtctc 360

caatctcatt ccatttttt atcctttcac tcagtgagcc cttcccctgc tcactgtgat 420

cg 422

<210> 600
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 600

gacaggatca gggcctcgga gctcgagaag tgcctgcaga aagtaggtga ggacgccctc 60

accaagaaga tgaggagagc catcgaggag ctgagcaccg gcatcgttaa caagctcctc 120

catggcccgc tgcagcacct gaggtgcgac ggcagcgaca gccgcaccct tgacgagacg 180

ctcgagaaca tgcacgctct caaccggatg ttcagcctcg acatggagaa ggcgatcatc 240

gagcagaaga tcaaggccaa ggtggagaag acacaaaact ga 282

<210> 601
<211> 262
<212> nucleic acid
<213> Zea mays

<400> 601

tgacgttctc accaagaaga tgaggagagc catcgaggag ctaagcaccg gcatcgtgaa 60

caagctcctc cacggcccgc tgcagcacct gaggtgcgac ggtagtaaca gccgcaccct 120

tgatgagacg ctcgagaaca tgcatgctct caaccggatg ttcagcctcg acacggagaa 180

ggcgatcatc gagcagaaga tcaaggccaa ggtggagaag acccagaatt gaggcctgga 240

gtcaattttt ctacccgtgt at 262

<210> 602
<211> 288
<212> nucleic acid
<213> Zea mays

<400> 602

gacgccctca ccaagaagat gaggagagcc atcgaggagc tgagcaccgg catcgttaac 60

aagctcctcc atggcccgct gcagcacctg atgctggacg gcagcgacag ccgcaccctt 120

gacgagacgc tcgagaacat gcacgccctc aaccggatgt tcagcctcga catggagaag 180

gcgatcatcg agcagaagat caaggccaag gtggagaaga cacaaaactg aggccaggaa 240

gcaatttttc taccaccatt atctatatat atagcgtctc caatctca 288

<210> 603
<211> 139
<212> nucleic acid
<213> Zea mays

<400> 603

cgatcatcga gcagaagatc aaggccaagg tggagaagac acaaaactga ggccaggaag 60

caatttttct accaccatta tctatatata tagcgtctcc aatctcattc catttttta 120

tcctttcact cagtgagcc 139

<210> 604
<211> 460
<212> nucleic acid
<213> Zea mays

<400> 604

cccacgcgtg cgcccactcg tccggtggta ttcccgcttg cgagcttagg gagcacctgg 60

tcatcttgcg aagcagtgat gccacacgcc atctgtttga ggtgtcagct ggccttgact 120

ctttggttct cggtgaagga caaatccttg ctcaggttaa acaagttgtg aggagtggac 180

agaacagtgg aggcttggga aagaacattg ataggatgtt caaggatgca atcactgctg 240

gaaagcgtgt ccgctgcgag accaacatat catctggtgc tgtttctgtc agttcagcgg 300

cggttgaact ggccctgatg aagcttccga agtctgaagc actgtcagct aggatgcttc 360

tgattggtgc tggtaaaatg ggaaagctag tgatcaaaca tctggttgcc aaaggatgca 420

tgaaggttgt tgtggtgaac cgctccgtgg aaagggtgga 460

<210> 605
<211> 322
<212> nucleic acid
<213> Zea mays

<400> 605

aacaagttgt gaggagtgga cagaacagtg gaggcttggg aaagaacatc gataggatgt 60

tcaaggatgc aatcactgct ggaaagcgtg tccgcagcga gaccaacata tcatctggtg 120

ctgtttctgt cagttcagcg gcggttgaac tggccctgat gaagcttccg aagtctgaag 180

cactgtcagc taggatgctt ctgattggtg ctggtaaaat gggaaagcta gtgatcaaac 240

atctggttgc caaaggatgc aagaaggttg ttgtggtgaa ccgctccgtg gaaagggtgg 300

atgctattcg tgaggagatg aa 322

<210> 606
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 606

tcccgcttcc gagcttaggg agcacctgtt catcttgcga agcagtgatg ccacacgcca 60

tctgtttgag gtgtcagctg gccttgactc tttggttctc ggtgaaggac aaatccttgc 120

tcaggttaaa caagttgtga ggagtggaca gaacagtgga ggcttgggaa agaacattga 180

taggatgttc aaggatgcaa tcactgctgg aaagcgtgtc cgctgcgaga ccaacatatc 240

atctggtgct gtttctgtca gttcagcggc ggttgaactg gccctgatga agcttccgaa 300

gtctgaagca 310

<210> 607
<211> 298
<212> nucleic acid
<213> Zea mays

<400> 607

gtgaaggaca aatccttgct caggttaaac aagttgtgag gagtggacag aacagtggag 60

gcttgggaaa gaacatcgat aggatgttca aggatgcaat cactgctgga aagcgtgtcc 120

gcagcgagac caacatatca tctggtgctg tttctgtcag ttcagcggcg gttgaactgg 180

ccctgatgaa gcttccgaag tctgaagcac tgtcagctag gatgcttctg attggtgctg 240

gtaaaatggg aaagctagtg atcaaacatc tggttgccaa aggatgcaag aaggttgt 298

<210> 608
<211> 300
<212> nucleic acid
<213> Zea mays

<400> 608

agcgtgtccg cagcgagacc aacatatcat ctggtgctgt ttctgtcagt tcagcggcgg 60

ttgaactggc cctgatgaag cttccgaagt ctgaagcact gtcagctagg atgcttctga 120

ttggtgctgg taaaatggga aagctagtga tcaaacatct ggttgcgaaa ggatgcaaga 180

aggttgttgt ggtgaaccgc tccgtggaaa gggtggatgc tattcgtgag gagatgaaag 240

atatagagat cgtgtacagg cctctctcag acatgtatca agctgctgct gaagctgatg 300

<210> 609
<211> 234
<212> nucleic acid
<213> Zea mays

<400> 609

gttgaactgg ccctgatgaa gcttccgaag tctgaagcac tgtcagctag gatgcttctg 60

attggtgctg gtaaaatggg aaagctagtg atcaaacatc tggttgccaa aggatgcaag 120

aaggttgttg tggtgaaccg ctccgtggaa agggtggatg ctattcgtga ggagatgaaa 180

gatatagaga tcgtgtacag gcctctctca gacatgtatc aagctgctgc tgaa 234

<210> 610
<211> 278

<212> nucleic acid
<213> Zea mays

<400> 610

cgtgagactg gcggtggata acgcgtcatg gaccgacgat aagcagctcc aggacatgta 60

cctgatctgc aagtccgtcg cgatgcgaca tcgacgcacc tgggagcggg catgagagga 120

gaagctcaag gcgttcgagc tcgcactggc gacggcagac gccacgttct agaacctcga 180

ctcgtcggag atctcactga cggacgtgag ccactacttc gactcggacc cgatcaagct 240

cgtgcattgg ctgctcaaag acgggcgagc ggcgtcct 278

<210> 611
<211> 251
<212> nucleic acid
<213> Zea mays

<400> 611

gaagatgtgt acaggggaag tgacaagggc atactggctg acgtcgagct tctgaggcag 60

atcactgagg cttcgcgcgg cgccatcacc gccttcgttg agaagaccac aaacagcaaa 120

gggcaagtcg tcaatgttac caacaacctc agcaagatac ttggtttcgg tctgtcggaa 180

ccatgggtgc agtacctgtc cacgaccaag ttcgtcagag cggacagaga gaagatgagg 240

gttctgtttg g 251

<210> 612
<211> 126
<212> nucleic acid
<213> Zea mays

<400> 612

gttctagatc gccagtctct tctcctcctt agttttcctc ttcagttctg cccatctgat 60

ggctctagtg cagagctgct ccactctctt gtgcaatgca tgtgacttcc ctgtcctggg 120

gtcccg 126

<210> 613
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 613

acgggatttg ccaaggatac aaacttgttc tcagtgtcga tgacaagaag ggacattcct 60

gccttgtcat cgaactgaga caagtgtatc cacgggattt gccaaggaaa ttgcaagggt 120

tgcccagggg aaatattatt acctccctaa tgcttcagat gctgtaattt ctgctgactc 180

caagaccgcc ctgacagact tgaagagctc atgattttgc agcagcggca cccgttttct 240

gtacctttg atagggatgg tgaaccttca ttcatgcagt aatttttgcg taggcc 296

<210> 614
<211> 286
<212> nucleic acid
<213> Zea mays

<400> 614

gtgaacactt gcttgatcgt attgcaatta atttaagtgc tgatcttcca atgagttttg 60

atgaccgcgt tgaagcagtg gatattgcaa cacggtttca ggagtctagc aaagaagttt 120

tcaaattggt ggaagaaaaa actgaaactg caaaaactca gataattttt gcaagagagt 180

atctgaagga tgttactatt agcacagagc agctcaaata tcttgtcatg gaagctatac 240

gaggtggctg tcaggggcat cgtgctgagt tgtatgctgc ccgagt 286

<210> 615
<211> 239
<212> nucleic acid
<213> Zea mays

<400> 615

cggacgcgtg gcaaccacgg ctgccttgaa gagcgccaag atcgtcgtgg accgtctcct 60

ggagaggcag acggctgaca atggcggcaa gtaccctgag acggtcgcac ttgtcctgtg 120

gggcaccgac aacatcaaga cctatggtga gtcactagcc caggtgctgt ggatgattgg 180

agttcggcca gttgccgaca ccttcggccg tgtcaaccgt gtggagcctg tcagccttg 239

<210> 616
<211> 233
<212> nucleic acid
<213> Zea mays

<400> 616

gggagtgctt gaagctcgtg gtacaggaca atgagctggg cagcggcaga ggctactggg 60

agacatcgga ggagaacctg gacaggctca gggagctcta ctcggaggtt gaagacaaga 120

ttgaggggat tgaccggtaa accgatttgc cagattcaaa ggaatgagaa gcttggaact 180

cttgtgtctc attgaggctc ttgtacaatg tgtgtgtagc ttatatatat ata 233

<210> 617
<211> 302
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (76)
<223>

<400> 617

cggacgctgc gggtacgaga gggctcgttt cgacagggat ccgaagacgt tccgtgagtc 60

gtatcatgac gatcangaga atctccagca gcagatatca tctgcacgga gtaaccttgg 120

cgctgtgcag attgaccatg acctccgtgt caagatatcc aaggtgtgct ctgagttgaa 180

cgttgatgga ctcagaggtg acattgtgac taacatggct gccaaggcgc tggctgcgtt 240

gaaaagaatg gacagcgtca ccgtggagga cattgctact gtcattccca actgcttgag 300

gc 302

<210> 618
<211> 261
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (27),(95),(101),(109),(115),(120),(122),(124),(128),
(142),(146),(153)...(154),(162),(175),(186),(192),(198),
(206),(208)...(210),(215),(217),(222),(230)...(231),
(239),(245),(249),(255)
<223> unsure at all n locations

<400> 618

gtttgggttc ttgggggagt gcctgangct cgtcgtgcaa gacaacgagc tgggaagctt 60

gaagcttgcc ctcgagggaa gctacgtcga gcctngccct ngcggcganc cgatncgtan 120

cncnaagngc tcccgacagg gnagancatc canntctcga tncgcaggtt atccnaaaca 180

aagctncctt tnaagaancc aaaatngnnn gtggncnggt tncttggagn ngtgaaggnt 240

ggaanatgng gaaantaccc g 261

<210> 619
<211> 262
<212> nucleic acid
<213> Zea mays

<400> 619

ggggcatcgt gctgagttgt atgctgcccg agttgcaaaa tgtctagctg ctatggaagg 60

acgtgaaaaa gtatttgtgg atgacctcaa gaaagctgta gagctggtca ttctacctcg 120

ctccatccta tctgataatc cacaggatca gcagcaagag catccacccc cacccccgcc 180

gccaccacct ccagaaaatc aagattcttc agaagaccaa gatgaggaag acgaagacca 240

agaggatgat gaagaagaaa at 262

<210> 620
<211> 125
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (68)
<223>

<400> 620

ccagttctgg ctcggcggct cgtcggacaa tctccagaac ttccttaaga tgatcggcgg 60

ctggtacntg cctgccctca aaggcgccgg catcaagtac gacgaccccc gtgctctacc 120

tcgac 125

<210> 621
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 621

gcaagggttg cccaggggaa atattattac ctccctaatg cttcagatgc tgtaatttct 60

gctgccacca agaccgccct gacagacttg aagagctcat gattttgcag cagcggcacc 120

cgttttctgt acctttttgat agggatggtg aaccttcatt catgcagtaa tttttgcgta 180

ggcctctaca atgacagggg gaaacaaacc cgagcatggc atcgtgtaaa gtgttaaggt 240

ccaatggcct cctgtccacg tttggcgatg taaatcctcc 280

<210> 622
<211> 274
<212> nucleic acid
<213> Zea mays

<400> 622

cagtaaggag gttagctgtt gatgccacgc ttagagcagc tgcaccatac caaaaactgc 60

gcagagagaa agaacgtgac aaaacaagaa aggttttcgt tgaaaagact gacatgagag 120

ccaaaagaat ggctcgaaaa gcaggtgctc tagtcatatt tgttgtggac gctagtggta 180

gcatggctct gaatcgtatg cagaatgcta aaggtgcggc gttgaagttg cttgcagaaa 240

gctacaccag cagagatcag gtttcaatta ttcc 274

<210> 623
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 623

aaagcctatg cttcctaagg gtccagtaag gaggttagct gttgatgcca cgcttagagc 60

agctgcacca taccaaaaac tgcgcagaga gaaagaacgt gacaaaacaa gaaaggtttt 120

tgttgaaaag actgacatga gagccaaaag aatggctcga aaagcaggtg ctctagtcat 180

atttgttgtg gacgctagtg gtagcatggc tctgaatcgt atgcagaatg ctaaaggtgc 240

ggcgttgaag tt 252

<210> 624
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 624

aaagcctatg cttcctaagg gtccagtaag gaggttagct gttgatccca cgcttagagc 60

agctccacca taccaaaaac tgcgcagaga gaaagaacgt gacaaaacaa gaaaggtttt 120

tgttgaaaag actgacatga gagccaaaag aatggctcga aaagcaggtg ctctagtcat 180

atttgttgtg gacgctagtg gtagcatggc tctgaatcgt atgcagaatg ctaaaggtgc 240

ggcgttgaag tt 252

<210> 625
<211> 260
<212> nucleic acid
<213> Zea mays

<400> 625

caaaaacagc gcagagagaa agaacgtgac aaaacaagaa aggtttttgt tgaaaagact 60

gacatgagac ccaaaagaat ggctcgaaaa gcaggtgctc tagtcatatt tgttgtagac 120

gctagtagta gcatggctct gaatcgtatg cagaatgcta aaggtgcggc gttgaagttg 180

cttgcagaaa gctacaccag cagagatcag gtttcaatat tccttttcgt ggagattatc 240

tgaggtttgc tccaccatca 260

<210> 626
<211> 260
<212> nucleic acid
<213> Zea mays

<400> 626

caacccatca gaggccacgg tggccaagcg ccggagctac gcgaacacca tcagctacct 60

gaccccaccg gccgagaacg ccggcctcta caaggggctc aagcagctgt cagagctcat 120

ctcttcctac cagtctctca aggacaccgg gcgtggtcct cagattgtga gctccatcgt 180

cagcactgca aagcagtgca acctcgacaa ggatgtcccg ctgcccgagg aaggggagga 240

gtcccaccaa aggagcgtga 260

<210> 627
<211> 122
<212> nucleic acid
<213> Zea mays

<400> 627

caaggacacc gggcgtggtc ctcagattgt gagctccatc gtcagcactg caaagcatgc 60

aacctcgaca aggatgtccc cctgcctgag gaaggggagg agctcccacc aaaggagcgt 120

ga 122

<210> 628
<211> 306
<212> nucleic acid
<213> Zea mays

<400> 628

gtcgacgtgc tgctggattc cgctgcgtcg gggtggaaca cggtggagag ggacggtatc 60

tccatatccc accctgctcg cttcatcctc atcggctctg gtaacccgga ggaaggggag 120

ctcaggcccc agctgctgga ccggttcggg atgcacgcgc aggttggtac cgtcagggac 180

gccgagctca gggtgaagat cgtggaggag agggctcgtt tcgacaggga tccgaagacg 240

ttccgtgagt cgtatcatga cgagcaggag aagctccagc agcagatatc atctgcacgg 300

agtaac 306

<210> 629
<211> 269
<212> nucleic acid
<213> Zea mays

<400> 629

acctcgttga cgtgctgctg gattccgctg cgtcggggtg gaacacggtg gagagggagg 60

gtatctccat atcccaccct gctcgcttca tcctcatcgg ctctggtaac ccggggaagg 120

ggagctcagg ccccagctgc tggaccggtt cgggatgcac gcgcaggttg gtaccgtcag 180

ggacgccgag ctcagggtga agatcgtgga ggagagggct cgtttcgaca gggatccgaa 240

gacgttccgt gagtcgacca tgacgagca 269

<210> 630
<211> 269
<212> nucleic acid
<213> Zea mays

<400> 630

caccctgctc gcttcatcct catcggctct ggtaacccgg aggaagggga gctcaggccc 60

cagctgctgg accggttcgg gatgcacgcg caggttggta ccgtcaggga cgccgagctc 120

agggtgaaga tcgtggagga gagggctcgt ttcgacaggg atccgaagac gttccgtgag 180

tcgtaccatg acgagcagga gaagtccagc agcagatatc atctgcacgg ataacttggc 240

gctgtgcaga ttgaccatga ctccgtgtc 269

<210> 631
<211> 433
<212> nucleic acid
<213> Zea mays

<400> 631

cgtcgacctg ctcccggaca tccgcgtcgt cgtcggcgac cccttcaact ccgacccgga 60

cgaccccgag gtcatgggcc ccgaggtccg ccagcgggtc ctgcaggggg acaccggcct 120

ccccgtcacc accgccaaga tcaccatggt cgacctgccc ctcggcgcca ccgaggaccg 180

cgtctgcggc accattgaca tcgagaaggc gctcaccgag ggcgtcaagg cgttcgagcc 240

cggcctgctc gccaaggcca acaggggcat actgtacgtc gacgaggtca acctgctgga 300

cgaccacctc gtcgacgtgc tgctggattc cgctgcgtcg gggtggaaca cggtggagag 360

ggagggtatc tccatatccc accctgctcg cttcatcctc atcggctctg gtaacccgga 420

ggaaggggag ctc 433

<210> 632
<211> 281
<212> nucleic acid
<213> Zea mays

<400> 632

ggggcacggg gaagtccacc accgtccgct ccctcgtcga cctgctcccg gacatccgtc 60

gtcgtcgtcg gcgacccctt caactccgac ccggacgacc ccgaggtcat gggccccgag 120

gtccgccagc gggtcctgca gggggacacc ggcctccccg tcaccaccgc caagatcacc 180

atggtcgacc tgcccctcgg cgccaccgag gaccgcgtct gcggcaccat tgacatcgag 240

aaggcgctca ccgagggcgt caaggcgttc gagcccggcc t 281

<210> 633
<211> 273
<212> nucleic acid
<213> Zea mays

<400> 633

tgcccctcgg cgccaccgag gaccgcgtct gcggcaccat tgacatcgag aaggcgctca 60

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ccgagggcgt caaggcgttc gagcccggcc tgctcgccaa ggccaacagg ggcatactgt 120

acgtcgacga ggtcaacctg ctggacgacc acctcgtcga cgtgctgctg gattccgctg 180

cgtcggggtg gaacacggtg gagagggagg gtatctccat atcccaccct gctcgcttca 240

tcctcatcgg ctctggtaac ccggaggaag ggg 273

<210> 634
<211> 227
<212> nucleic acid
<213> Zea mays

<400> 634

agatcggcgg cgtcatgatc atgggcgaca ggggcacggg gaagtccacc accgtccgct 60

ccctcgtcga cctgctcccg gacatccgcg tcgtcgtcgg cgaccccttc aactccgacc 120

cggacgaccc cgaggtcatg ggccccgagg tccgccagcg ggtcctgcag ggggacaccg 180

gcctccccgt caccaccgcc aagatcacca tggtcgacct gcccctc 227

<210> 635
<211> 372
<212> nucleic acid
<213> Zea mays

<400> 635

cccacgcgtc cgggcaagtc gtcaatgttg ccaacaacct cagcaagata cttggtttcg 60

gcctgtcgga accatgggtg cagtacctgt ccacgaccaa gttcgtcaga gcggacagag 120

agaagatgag ggttctgttt gggttcttgg gggagtgcct gaggctcgtc gtgcaagaca 180

acgagctggg aagcttgaag cttgccctcg agggaagcta cgtcgagcct ggccctggcg 240

gcgacccgat ccgtaacccg aaggtgctcc cgacagggaa gaacatccac gctctcgatc 300

cgcaggccat cccaaccacg gctgccttga agagcgccaa gatcgtcgtg taccgtctcc 360

tggagaggca ga 372

<210> 636
<211> 263
<212> nucleic acid
<213> Zea mays

<400> 636

gttcgtcaga gcggacagag agaagatgag ggttctgttt gggttcttgg gggagtgcct 60

gacggtcgtc gtgcaagaca acgagctggg aagcttgaag cttgccctcg agggaagcta 120

cgtcgagcct ggccctggcg gcgacccgat ccgtaacccg aaggtgctcc cgacagggaa 180

gaacatccac gctctcgatc cgcaggccat cccaaccacg gctgccttga agagcgccaa 240

gatcgtcgtg gaccgtctcc tgg 263

<210> 637
<211> 272
<212> nucleic acid
<213> Zea mays

<400> 637

cccacgcgtc cggttgccaa caacctcagc aagatacttg gtttcggcct gtcggaacca 60

tgggtgcagt acctgtccac gaccaagttc gtcagagcgg acagagagaa gatgagggtt 120

ctgtttgggt tcttggggga gtgcctgatg ctcgtcgtgc aagacaacga gctgggaagc 180

ttgaagcttg ccctcgaggg aagctacgtc gagcctggcc ctggcggcga cccgatccgt 240

aacccgaagg tgctcccgac agggaagaac at 272

<210> 638
<211> 273
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (27),(29),(40),(46),(116),(154),(161)...(162),(170),
(202),(251)
<223> unsure at all n locations

<400> 638

gtttgggttc ttgggggagt gcctgangnt cgtcgtgcan gacaangagc ttggaatctt 60

gaatcttgcc ctcgagggaa gctacgtcga gcctggccct ggcggcgacc cgattncgta 120

acccgaaggt gctcccgaca ggaagaacat ctangctctt nnatccgcan gccatcccaa 180

ccacggctgc cttgaagagc gncaagatcg tcgtggaccg tctcctggag aggcagaagg 240

ctgacaatgg nggcaagtac cctgagacgg tcg 273

<210> 639
<211> 301
<212> nucleic acid
<213> Zea mays

<400> 639

acttgctgaa gcacatagag gtgttcttta tgttgatgaa ataaatctat tggatgatgg 60

cataagcaat ctacttctga atgtcttgac ggagggagtt aacattgtgg aaagagaggg 120

cattagcttt cgccatccct gcaaaccact tctaattgct acttacaatc cagaggaagg 180

gtctgtacgt gaacacttgc ttgatcgtat tgcaattaat ttaagtgctg atcttccaat 240

gagttttgat gaccgcgttg aagcagtgga tattgcaaca cggtttcagg agtctagcaa 300

a 301

<210> 640
<211> 307
<212> nucleic acid
<213> Zea mays

<400> 640

ggtgttcttt atgttgatga aataaatcta ttggatgatg gcataagcaa tctacttctg 60

aatgtcttga cggagggagt taacattgtg gaaagagagg gcattagctt tcgccatccc 120

tgcaaaccac ttctaattgc tacttacaat ccagaggaag gatctgtacg tgaacacttg 180

cttgatcgta ttgcagttaa tttaagtgct gatcttccaa tgagttttga tgaccgcgtt 240

gaagcagtgg atattgcaac acggtttcag gagtctaggc aagaagtttt caaattggtg 300

gaagaaa 307

<210> 641
<211> 278
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (50)
<223>

<400> 641

tgttgatgaa ataaatctat tggatgatgg cataagcaat ctacttctgn atgtcgtgac 60

ggagggagtt aacattgtgg aaagagaggg gattagcttt cgccatccct gcaaaccact 120

tctaattgct acttacaatc cagaggaagg atctgtacgt gaacactctg ctgatcgtat 180

tgcattaatt aagtgctgat cagcaatgag tttgatgacg cgttgaacat ggatatcaca 240

ccggttcaga gctacaagaa tttcaatcgt ggagaaaa 278

<210> 642
<211> 426
<212> nucleic acid
<213> Zea mays

<400> 642

cccacgcgtt cgcccacgcg ttcgcggtga caagggtgtt ctcgaacgca tcaggctggt 60

actcgtccaa cgtgaacctg gccgtggaga acgcgtcatg gaccgacgag aagcagctcc 120

aggacatgta cctgagccgc aagtccttcg cgttcgacag cgacgcccca ggggcaggca 180

tgaaggagaa gcgcaaggcg ttcgagctcg ccctggcgac ggcggacgcc acgttccaga 240

acctcgactc gtcggagatc tcgctgacgg acgtgagcca ctacttcgac tcggacccga 300

ccaagctcgt gcaggggctg cgcaaggacg ggcgggcgcc gtcctcgtac atagccgaca 360

ccaccacggc gaacgcccag gtgaggacgc tgtcggagac ggtgcgcctc gacgcgagga 420

ccaagc 426

<210> 643
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 643

ccgcgtgtcg ctaagggagg cggcgacaag ggtgttctcg aacgcatcac gctcctactc 60

gtccaacgtg aacctggccg tggagaacgc gtcatggacc gacgagaagc agctccagga 120

catgtacctg acccgcaagt ccttcgcgtt cgacagcgac gccccagggg caggcatgaa 180

ggagaagcgc aaggcgttcg acctcgccct ggcgacggcg gacgccacgt tccagaacct 240

cgactcgtcg gagatctcgc tgacggacgt gagccactac ttcgactcgg acccgaccaa 300

gctcgtgcag gg 312

<210> 644

<211> 287
<212> nucleic acid
<213> Zea mays

<400> 644

acgtgagcca ctacttcgac tcggacccga ccaagctcgt gcaggggctg cgcaaggacg 60

ggcgggcgcc gtcctcgtac atagccgaca ccaccacggc gaacgccagg tgaggacgct 120

gtcggagacg gtgcgcctcg acgcgaggac caagctgctg aaccccaagt ggtacgaggg 180

gatgatgaag agcgggtacg aggggtcag ggagatcgag aagcggctca ccaacaccgt 240

cgggtggagc gccacgtctg ggcaggtcga caactgggtc tacgagg 287

<210> 645
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 645

gtacctgagc cgcaagtcct tcgcgttcga cagcgacgcc ccaggggcag gcatgaagga 60

gaagcgcaag gcgttcgagc tcgccctggc gacggcggac gccacgttcc agaacctcga 120

ctcgtcggag atctcgctga cggacgtgag ccactacttc gactcggacc cgaccaagct 180

cgtgcagggg ctgcgcaagg acgggcgggc gccgtcctcg tacatagccg acaccaccac 240

ggcgaacgcc aggtgaggac gctgtcggag acggtgcgc 279

<210> 646
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 646

aagatggtgg ccgaactgga cgagccagca gagatgaact acgtgcgaat accccaggag 60

taggcggagg agctcggcgt gtcgctaagg gaagcggcga caagggtgtt ctcgaacgca 120

tcaggctcct actcgtccaa cgtgaacctg gcggtggaga acgcgtcatg gaccgacgat 180

aagcagctcc aggacatgta cctgagccgc aagtccttcg cgttcgacag cgacgcccct 240

ggggcaggca tgaaggagaa gcgcaaggcg ttcgagctcg 280

<210> 647

<211> 213
<212> nucleic acid
<213> Zea mays

<400> 647

ggcgacggcg gacgccacgt tccagaacct cgactcgtcg gagatctcga tgacggacgt 60

gagccactac ttcgactcgg acccgaccaa gctcgtgcag gggctgcgca aggacgggcg 120

ggcgccgtcc tcgtacatag ccgacaccac cacggcgaac gcccaggtga ggacgctgtc 180

ggagacggtg cgcctcgacg cgaggaccaa gct 213

<210> 648
<211> 166
<212> nucleic acid
<213> Zea mays

<400> 648

aagcacgccc aggagcaggc ggaggagctc ggcgtgtcgc taagggaggc ggcgacaagg 60

gtgttctcga acgcatcagg ctcctactcg tccaacgtga acctgacggt ggagaacgcg 120

tcatggaccg acgagaagca gctccaggac atgtacctga gccgca 166

<210> 649
<211> 449
<212> nucleic acid
<213> Zea mays

<400> 649

gggatgatga agagcgggta cgaggggtc agggagatcg agaagcggct caccaacacg 60

cgtcgggtgg agcgccacgt ctgggcaggt cgacaactgg gtctacgagg aggccaactc 120

cacgttcatc gaggacgagg cgatgaggaa gaggctcatg gacaccaacc ccaattcgtt 180

caggaagttg gtgcagacct tcctggaagc cagtggcaga ggctactggg agacaacgga 240

ggagaacctg gacaggctca gggagctcta ttcggaggtt gaagacaaga ttgaggggat 300

tgacaggtaa attgatttgc cagatcggtc ggccgatcgg ttccagcatt caacccataa 360

cgagcttgga actcttctgc ctcattggga ctcttgtaca atgtctgggt gtgtgattta 420

tatatatata aaagtgtaac atgtaatac 449

<210> 650

<211> 305
<212> nucleic acid
<213> Zea mays

<400> 650

cgagaagcgg ctcaccaaca ccgtcgggtg gagcgccacg tctgggcagg tcgacaactg 60

ggtctacgag gaggccaact ccacgttcat cgaggacgag gcgatgagga agaggctcat 120

ggacaccaac cccaattcgt tcaggaagtt ggtgcagacc ttcctggaag ccagtggcag 180

aggctactgg gagacaacgg aggagaacct ggacaggctc agggagctct attcggaggt 240

tgaagacaag attgagggga ttgacaggta aattgatttg ccagatcggt cggccgatcg 300

gttcc 305

<210> 651
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 651

gacgcgagga ccaagctgct gaaccccaag tggtacgagg ggatgatgaa gagcgggtac 60

gaggggtca gggagatcga gaagcggctc accaacaccg tcgggtggag cgccacgtct 120

gggcaggtcg acaactgggt ctacgaggag gccaactcca cgttcatcga ggacgaggcg 180

atgaggaaga ggctcatgga caccaacccc aattcgttca ggaagttggt gcagaccttc 240

ctggaagcca gtggcagagg ctactgggag 270

<210> 652
<211> 440
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (412)
<223>

<400> 652

cattgttcag ctgccggctc agtatctgag actcgtgggt cgtcacaagc ctctacactg 60

acgtcctact aggacgaggc gatgaggaag aggctcatgg acaccaaccc caattcgttc 120

aggaagttgg tgcagacctt cctggaagcc agtggcagag gctactggga gacaacggag 180

gagaacctgg acaggctcag ggagctctat tcggaggttg aagacaagat tgaggggatt 240

gacaggtaaa ttgatttgcc agatcggtcg gccgatcggt tccagcattc aacccataac 300

gagcttggaa ctcttctgcc tcattgggac tcttgtacaa tgtctgggtg tgtgatttat 360

atatatataa aaagttgtaa catgtaatac tggaggatac aatatttaac anagagggtg 420

gcggttgttc catccaaaac 440

<210> 653
<211> 213
<212> nucleic acid
<213> Zea mays

<400> 653

tgcagatccg gacattatcc gtcttcctag gctctttcgc tttctgcaga agccacttgc 60

aaaattcata tcagaagtga gagcaccaaa aagtaaggaa ggttatgcat ccataggtgg 120

cggttctcct ctacgacaaa ttactgatgc acaggctgaa gcactgaggg aggcattaca 180

tgggaaagat gccctgccaa cgtgtatgtt gga 213

<210> 654
<211> 261
<212> nucleic acid
<213> Zea mays

<400> 654

cccacgcgtc cgggtaccct ttcacagaag aggccattga tcaaattaaa aaggataaga 60

ttaccaagct cgttgttctt ccccctttacc ctcagtactc catatcaaca agtgggtcaa 120

gcattcgtgt tctccaagac attgtcaagg aagattcata tttttctggt ttgccaattt 180

ccattattga atcatggtac caacgagatg gctatgtgaa atcaatgtct gacctaattg 240

aaaaggagct ctcggccttc t 261

<210> 655
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 655

tgagatccag aggaatctta aatggtcaca ctttggcgta tcagagtcgg gtgggaccag 60

ttcaatggct gaagccatat actgatgaag ttttagtaga aattggtcag aacggtgtga 120

agagcctcct ggctgttcca gtaagcttcg tgagcgagca cattgagaca ctggaagaaa 180

tagacatgga gtacaaggag ttggctctgg aatcaggcat tgagaactgg ggccgggtcc 240

ctgctcttgg atgcacttcg acgttcatct ccgacttgca gatgcggttg t 291

<210> 656
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 656

actgctagca gcatacgact cgaagcgcga tgagctccct ccaccggtaa tcgtgtggga 60

gtggggctgg acaaagagcg cggagacctg gaatagccgt gcggcgatgc tggccgtgct 120

ggctctcctg gtgctggaag tgaccaacgg cgaagggttc ctgcatcaat ggggaatcct 180

gcctctgttc cgctgagccg acaattctgt tcatgatggg gtcataattt tgctgcagcc 240

gaaggaagtt ttgaacttct gatgctgtat atgaa 275

<210> 657
<211> 261
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (247)...(248)
<223> unsure at all n locations

<400> 657

atcaagagga atcttagata gtcatacttt ggcgtaccag aatcgggtgg agctagttca 60

atggctgaag ctatatactg atgaagtatt agtagaactt ggtgaaaagg gtgtgaagag 120

cctactggct gttacagtaa gccttgagag taaagacatc gagacattgg aagaaattga 180

catggagtac aaggagttgg ctctggaatc aggcatcaag aactggggtc gggttcctgc 240

tctgatnnac acttcaacat t 261

<210> 658
<211> 398
<212> nucleic acid

<213> Zea mays

<400> 658

acggacgcgt gggtttagca taacacgggg tgcatgcaca tgtatccgat tccctgcatc 60

actcacacct cacttttttct gctaaattgt ggcagtggtg ataattgata tgcatagact 120

gtacttattt aatgactatg aaataccatt taacatagct attgtgcctg acagggtaaa 180

tctaccaagg acacacatag ttaagccttg ctcagctgac gactgctaag gaatttctgt 240

taagtgcagt ttgggggggtc ttctcaacca ttgcttgact taaggcaaca cattagagga 300

tattcatcag catcagaggc aattcttccc aatctgattt gagaaaaaaa tttgttggca 360

acgaaaaatt agtgttttct tgctgaatct tgggggggc 398

<210> 659
<211> 356
<212> nucleic acid
<213> Zea mays

<400> 659

gctttgatca tgggggagtt aagatcaaga ggaatcttaa atagtcacac tttggcgtac 60

caggtaaatg ctattaaaat ttggtaggta attgtttcac taacaacgga gttgtgccct 120

tatgttttaa tgatcacctt gtaagaacac taggaatgga aactgccaag ttatataggc 180

ttcaggagtt accagttcct taattttcca ggtcaccatt aactagtgtt aacatttatt 240

gtacacgcag agtcgggtgg ggccagttca atggctgaag ccatatactg atgaagtttt 300

agtagaactt ggtcaaaagg gtgttaagag cctcctggct gttccagtaa gctttg 356

<210> 660
<211> 266
<212> nucleic acid
<213> Zea mays

<400> 660

cccacgcgtc cgaaagatgt tcctgccaac gtgtatgttg gaatgcggta ttggcatccc 60

ttcactgaag aagccataga acaaataaaa cgggatggaa tcacgaaact tgttgtgttg 120

cctctatacc ctcagttctc catatcaact agtggttcaa gtctccgttt attggagagc 180

atattcagag aggatgagta tctcgtgaat atgcaacata cagttatacc ttcctggtac 240

caacgtgaag gatatatcaa ggctat 266

<210> 661
<211> 260
<212> nucleic acid
<213> Zea mays

<400> 661

cggacgcgtg gcgcgacgcg tgggcggacg cgtgggcgga cggtggggaa agatgttcct 60

gccaacgtgt atgttggaat gcggtattgg catccctatc actgaagaag ccatagaaca 120

aacaaaacgg gatgcaatca cgaaacttgt tgtgttgcct ctataccctc agttctccat 180

atcaactagt ggttcaagtc tccgtttatt ggagagcata ttcagagagg atgagtatct 240

cgtgaatatg caacatacag 260

<210> 662
<211> 195
<212> nucleic acid
<213> Zea mays

<400> 662

cccacgcgtc cgcccacgcg tccgcccacg cgtccgccca cgcgtccgat ggaatcacga 60

aacttgttgt gttgcctcta taccctcagt tctccatatc aactagtggt tcaagtctcc 120

gtttattgga gagcatattc agagaggatg agtatctcgt gaatatgcaa catacagtta 180

taccttcctg gtacc 195

<210> 663
<211> 430
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (384),(402),(419),(421)
<223> unsure at all n locations

<400> 663

gccgccgttg ggccttttgc cggcgacggg aacccatcac accaggtcat ggggcaaaac 60

aacctccaca agttttactg gttctaccac caaacatgag cagagcttgc atggaaatgt 120

taagccgttg caattggcgg caaatgaatc ctctcgtttg gcttacagaa gtccagcact 180

taaaaaccag tggaatcttc ctgctagttc ttcctccact aatgtggtta ccacctttga 240

tgataacgaa cacgtgtctt ccagtgttat tgaagaaaaa gttggagtac tgttattaaa 300

ccttggtggt ccagagacac ttgacgatgt tcaaccattt ttattcaacc tatttgctga 360

tccagatatc attcgactcc ctangctctt caagtttcct cnaagacact gggcaaacnt 420

ntatttaatt 430

<210> 664
<211> 199
<212> nucleic acid
<213> Zea mays

<400> 664

aaacaacctc cacaagtttt actggttcta ccaccaaaca tgagcagagc ttgcatggaa 60

atgttaagcc gttgcaattg gcggcaaatg aatcctctcg tttggcttac agaagtccag 120

cacttaaaaa ccagtggaat cttcctgcta gttcttcctc cactaatgtg gttaccacct 180

ttgatgataa cgaacacgt 199

<210> 665
<211> 443
<212> nucleic acid
<213> Zea mays

<400> 665

gccacgtttg gtagttgcta cttgctacac cggaggaaga agaacaagta gtgcttttct 60

tctcttgtca cgttcacggg gcggccgatc gaccgttcac ctcgcccgac ggcccaagca 120

gcccatgtct tcgtcgggcc cctccccggc gacgggaatc cacgcgtcgc cgccgttggg 180

ccttttgccg gcgacgggaa cccatcacac caggtcatgg ggcaaaacaa cctccacaag 240

ttttactggt tctaccacca aacatgagca gagcttgcat ggaaatgtta agccgttgca 300

attggcggca aatgaatcct ctcgtttggc ttacagaagt ccagcactta aaaaccagtg 360

gaatcttcct gctagttctt cctccactaa tgtggttacc acctttgatg ataacgaaca 420

cgtgtcctcc agtgttattg aag 443

<210> 666
<211> 304

<212> nucleic acid
<213> Zea mays

<400> 666

gagactccat atcaacaagt agcatatttt ttactaagaa gaagagaagg gaagattcat 60

atttttctgg cttgccaatc tccattatcg aatcatggta ccaacgtgat ggctatgtga 120

aatcaatggc tgacctaatt gaaaaagagc tatctgcctt ttccaatcct gaagaggtaa 180

tgatatgctt cagtgcacat ggtgtgccac ttacctatgt tcaggatgct ggagatcctt 240

acagagatca gatggaggat tgtatttctg tgatcatggg ggagctgaga tccagaggaa 300

tctt 304

<210> 667
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 667

ttcgtgttct ccgaaatgtt gtcaagggag attcatattt ttctggcttg gcaatctcca 60

gtatcgaatc atggtagcaa cgtgatggct atgtgaaatc agtggctgac ctgattgaga 120

aagaggtatc tgccttttcc agtcctgaag aggtagtgat attcttcagt gcacatagtg 180

tgccacttag ctatgtgcag gatgctggag atccttacag agatcagatg gatgattgta 240

tttctttgat cgtggg 256

<210> 668
<211> 263
<212> nucleic acid
<213> Zea mays

<400> 668

agaggttatg atattcttca gtgcacatgg tgtgccactt acctatgttg aggatgctgg 60

agatccttac agagatcaga tggaggattg tattgctttg atcatggggg agttaagatc 120

aagaggaatc ttaaatagtc acactttggc gtaccagagt cgggtggggc cagttcaatg 180

gctgaagcca tatactgatg aagttttagt agaacttggt caaaagggtg tgaagagcct 240

catggctgtt ccagtaagct ttg 263

<210> 669
<211> 266
<212> nucleic acid
<213> Zea mays

<400> 669

agaggttatg atattcttca gtgcacatgg tgtgccactt acctatgttg aggatgctgg 60

agatccttac agagatcaga tggaggattg tattgctttg atcatggggg agttaagatc 120

aagaggaatc ttaaatagtc acactttggc gtaccagagt cgggtggggc cagttcaatg 180

gctgaagcca tatactgatg aagttttagt agaacttggt caaaagggtg tgaagagcct 240

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gctcatgggg gagctgagat ccagaggaat cttaaatggt cacactttgg cgtatcagag 180

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ctggccaaac ttatttctac ttttagagct cctaagagta aagaagggta tgcttcaatg 180

gtggtgggtc gccgttaagg aaaattactg atgaacaggc gaatgctttg aagattgccc 240

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ctggccaaac ttatttctac ttttagagct cctaagagta aagaagggta tgcttcaatt 180

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at 122

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acattgaaac tttggaagaa atcgatgtgg agtacaaaga gttggctttg gaatctggca 180

tcaagcactg gggacgggtt ccagcactag gttgcgaacc cacattcatt tcggatcttg 240

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ctcggcagtc tctcgtaccc ctcgggagcg tggaggagct gctagcagca tacgactcga 360

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gtaaagagcc tgcttgctgt tcccattagt tttgttagcg aacacattga aactttggaa 180

gaaatcgatg tggagtacaa agagttggct ttggaatctg gcatcaagca ctggggacgg 240

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gtacaaagag ttggctttgg aatctggcat caagcactgg ggacgggttc cagcactagg 240

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<213> Zea mays

<400> 677

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